





Microsoft

Build a 200-server infrastructure.



 Windows Server 2003

AMD

I need the ultimate 32-bit server
and the ultimate 64-bit server
to be the same server.

AMD

The AMD Opteron[™] processor, superior 32-bit performance with expanded 64-bit capability.

It's the only server processor designed to run your 32- and 64-bit applications simultaneously and without compromise. AMD Opteron runs on AMD64, a breakthrough architecture that enables 64-bit technology on the x86 platform—creating a new class of computing.

The world's highest performing 2P and 4P industry standard servers are now powered by AMD Opteron processors. Get unparalleled 32-bit performance and the ability to transition seamlessly to 64-bit computing.



Leverage your existing investments while preparing for the future. It's one architecture across your enterprise that offers industry leading performance for your 32-bit applications, and doesn't require a forklift upgrade as more 64-bit applications emerge. It's just another way AMD designs and builds processors with you in mind. For a closer look at the AMD Opteron processor, visit www.amd.com/opteron

© 2003 Advanced Micro Devices, Inc. All rights reserved. AMD, the AMD logo, and AMD Opteron are trademarks of Advanced Micro Devices, Inc.

CONTENTS

11.10.03

AI Loves Lucy

In the Technology section: This week's Future Watch tells how a robot baby orangutan named Lucy may help researchers develop a machine that can supplement or even supersede the digital computer — a machine that can think, feel and learn. **Page 36**



Catering to the Wealthy

In the Management section: Companies are using IT to identify and pamper their richest customers. At Harrah's, CEO Tim Stanley (left) says his company entices casino customers by putting IT dollars behind its loyalty program and CRM application. **Page 41**

NEWS

- 4 Banks will be able to exchange electronic images of checks under a law that takes effect next October, provided the necessary technology is available by then.
- 5 Microsoft offers \$5 million in reward money to help nab malicious code writers, but some say it could be better spent.
- 5 Microsoft opponents are pushing for the courts to impose tougher restrictions, some of which would help Linux.
- 6 SAP upgrades its Enterprise Portal software and broadens operating system support.
- 8 Voice over IP is still drawing skepticism from users who wonder if the cost is justified.
- 8 MCI's emergence from bankruptcy protection could mean lower telecom costs for users, maybe even a price war.
- 12 Security administrators expect to spend most of their time next year focusing on privacy issues and regulatory compliance.
- 14 A bill mandating cybersecurity accountability is shelved amid pressure from vendors.
- 14 Veritas targets regulatory compliance and data lifecycle management with new storage tools.

20 Q&A: **Gerry Cohen**, CEO of Information Builders, predicts an upswing for the business-intelligence market.

TECHNOLOGY

- 27 Eyes Everywhere. Business activity monitoring systems draw on several types of applications to allow managers to take the pulse of their companies. But the technology isn't yet mature.
- 32 Emerging Technologies: Making Access a Figure of Speech. Voice authentication technology potentially offers users easy, secure access to IT systems, but accuracy and standards are still evolving.
- 38 Security Manager's Journal: SSL Broadens VPN Access. An alternative Secure Sockets Layer VPN opens up the corporate network to more users, but it also poses new security challenges to Vince Tuesday.

MANAGEMENT

- 44 Supply Chain vs. Supply Chain. The very nature of business competition is changing, from company vs. company to supply chain vs. supply chain. IT has a big — and difficult — role to play.



OPINIONS

- 8 On the Mark: Mark Hall chats with an engineer whose team's work will save Agilent a cool million per year.
- 24 Maryfran Johnson hates the marketing speak from vendors about grid, utility or whatever computing. So she asked users what their Grand Unified Buzzword would be.
- 24 Pinn Fox hits pay dirt when he talks to an exec in the oil patch about the best way to handle supply chain management.
- 25 David Moschella thinks Accenture may have hit a hole in one when it hired Tiger Woods for its latest marketing campaign. Service companies could replace product companies as industry leaders.
- 40 Robert L. Mitchell warns against blowhards selling snake oil to satisfy your security needs.
- 46 Bart Perkins lists several reasons why users may be unhappy over outsourcing deals.
- 58 Frankly Speaking: Frank Hayes reveals that most IT vendors will support products well beyond the end of their lives, allowing you to do nothing when facing upgrades.

DEPARTMENTS/RESOURCES

- At Deadline Briefs 4
News Briefs 12
Letters 25
IT Careers 40
Company Index 54
How to Contact CW 54
Shark Tank 56

ONLINE

WWW.COMPUTERWORLD.COM

What the Tech-Job Exodus Means to U.S. Programmers

CAREERS: Though global ramifications are very hard to predict, computer guru Ed Yourdon is again warning of disaster because of competition from low-priced, high-quality Indian software professionals, reports Career Journal's Bob Davis. **Q** QuidLink 42540

Object-Based Storage for Linux Clusters

STORAGE: RAID developer Garth Gibson looks at the challenges of storage in large clusters and provides an overview of object-based storage architecture. **Q** QuidLink 42641

Three Steps to Launching Reusable Software Assets

DEVELOPMENT: How to get value from asset-based development. **Q** QuidLink 42680

Network Security: Ask the Experts

NETWORKING: Have a question about keeping your network safe from malicious attacks, careless users, poor configurations and other threats? As part of our January Knowledge Center special report on network security, we invite you to send in a query to our panel of experts. Topics can include remote-access policies, monitoring tools, outsourcing issues and other concerns. Send queries to AskAnExpert@computerworld.com; sorry, due to the expected volume, not all questions will be answered.

What's a QuidLink?

Throughout each issue of Computerworld you'll see two-digit QuidLink codes pointing to related content on our Web site. Also, at the end of each story, a QuidLink to find story-related information, sharing it with colleagues. Just enter any of those codes into the QuidLink box, which is at the top of every page on our site.

ONLINE DEPARTMENTS

- Breaking News **Q** QuidLink 42530
Newsletter Subscriptions **Q** QuidLink 42430
Knowledge Centers **Q** QuidLink 42570
The Online Store **Q** QuidLink 42420

AT DEADLINE

Attack on Linux Kernel Thwarted

Linux kernel developers said they removed a Trojan virus that an attacker had planted on a server that hosts a copy of the operating system's source code. The kernel file had been changed to allow the attacker unauthorized access to Linux distributions built with the affected source code, the developers said. But they added that the server isn't widely used.

PeopleSoft Refund Offer Target of Suit

Attorneys pursuing a shareholder lawsuit against PeopleSoft Inc. filed a motion to block the company from paying refunds from its stock repurchase program. The move came one week after PeopleSoft expanded the time frame of the refund offer and the actions by an acquiring company that would trigger it. PeopleSoft, which faces a takeover bid by Oracle Corp., said it wanted to give users a higher level of security.

Fed Cybersecurity Policy to Be Revised

The Bush administration is rewriting a 1998 policy document on cybersecurity and critical infrastructure protection to take into account post-Sept. 11 homeland security requirements, sources said. A draft version of the rewrite places increased emphasis on the role of the private sector.

Akamai, C&W to Settle Lawsuits

Akamai Technologies Inc. and Cable & Wireless PLC's U.S. unit announced a deal to settle patent-infringement lawsuits related to their real content delivery network services. No money will change hands. But Cambridge, Mass.-based Akamai can pursue a damages claim resulting from a 2001 jury ruling that San Francisco-based C&W America had infringed on one of its patents.

Banks Await Software for Exchanges of Check Images

Law will allow use of images to settle payments, but IT changes are needed

BY LUCAS MEARIN

BANK IT managers last week said a new law that will let electronic check images be used to settle payments could save the financial industry billions of dollars. But the technology needed to support exchanges of images is still under development, they said.

The Check 21 bill, formally known as the Check Clearing for the 21st Century Act, was signed into law by President Bush on Oct. 28 and will take effect on that date next year. It frees banks from having to send paper checks to one another and sets the stage for major IT changes, including the addition of branch-based scanning systems, new data repositories and automated image processing applications.

Analysts estimate it will save the industry more than \$2 billion per year, mostly in shipping costs.

But Doug Smith, senior vice president of planning and engineering at Bank of America Corp. in Charlotte, N.C., said an industrywide rollout of electronic check clearance and settlement technology will likely take years.

He added that although Bank of America has installed imaging systems that let customers view their checks online, it doesn't have electronic presentation software to handle the exchange of check images.

Bank of America and J.P. Morgan Chase & Co., with help from Viewpointe Archive Services LLC, conducted a six-month image exchange test project that ended last February. Viewpointe, which was founded in 2000 by the two banks and IBM, stores 22 billion check images per day.

Jennifer Lucas, a spokes-

woman for Viewpointe, said the test project ran into problems when the banks tried to use check images to deal with so-called day-two settlements involving returned checks and other exceptions. Day-two processes are "paper-reliant" and couldn't handle the electronic images, Lucas said.

The cost of deploying imaging applications to handle day-two work alone can range from \$4 million to \$6 million for large banks, she added.

Ted Kute, senior vice president of item processing and treasury management operations at Huntington Bancshares Inc., said the Columbus, Ohio-based company has been doing check imaging for its customers for the past eight years. It also archives images for research uses, such as risk management analysis.

But Huntington is still waiting for image exchange software that supports common

CHECK REPLACEMENT DOCUMENT

Processing data
This is a copy of your check. It will be used to process your payment.

Scanned check image

Optional 2-D bar code security feature

Bank routing information from paper check

Image Replacement Document Identifier

specifications for electronic versions of checks, Kute said. "The industry has to develop the standards around what will be the acceptable image—a TIFF image, a JPEG file," he said. "It's going to take quite a bit of investment for many banks." Using check images will also require "a lot more storage," Kute added.

Brian Black, managing director of operations and payments at the Chicago-based Bank Administration Institute, said the biggest roadblock to electronic presentation will be

gaining widespread acceptance from banks. The law doesn't require them to accept checks in electronic form. "If one bank is sending and another can't receive, there's going to be a problem," Black said.

But Check 21 has the potential to create huge cost savings for banks, mostly through reduced transportation and check-handling costs, Smith said. Clearing and settling paper checks requires manual data entry and the shipment of checks to the banks that issued them, he noted. **C 42676**

Banks' Joint Ventures Make Imaging a Priority

Check 21 doesn't address exchanges of check images or the replacement of paper-based settlement processes with automated applications. But several development efforts are under way in the financial services industry to help eliminate the need for banks to ship checks to one another.

For example, Viewpointe this week will announce that it's teaming with Data Support Systems Inc., an Omaha-based software vendor, to offer a pay-per-use ASP approach to automating the day-two settlement process inside banks.

Small Value Payments Co. in New York is another bank-owned entity that's focusing on check-

imaging technology. SVPco, which is owned by a group of 22 large banks, is setting up a national network and switching center to manage the exchange of check images. The development work is expected to be completed by March, a spokesman said.

The Electronic Check Clearing House Organization, a Dallas-based not-for-profit company that's owned by 24 banks, has created a set of rules that cover things such as electronic check presentation, returned checks and guarantees that one bank would provide to another when exchanging images. SVPco has licensed the rules for use by its customers.

In addition, specifications gov-

erning the layout, data elements, content and printing of check images have been developed by a working group within the Accredited Standards Committee X9 Inc. standards body in Ann Arbor, Mich. Despite all the IT-related activity, Doug Smith, senior vice president of planning and engineering at Bank of America, noted that banks will have to convince consumers to forgo getting their original checks back at the end of each month.

"In a check-imaging world, we'd give our customers a picture," Smith said. "The customer's willingness to accept that is a social decision. It's really not a technology constraint."

—Lucas Mearin

Microsoft Puts Up \$5M Bounty To Nab Malicious Code Writers

Virus attacks will cost businesses \$12.5B this year

BY PATRICK THIRDEDALE AND
JAINUMAR VIJAYAN
WASHINGTON

The top target of virus writers, Microsoft Corp., is taking the offensive with a \$5 million reward fund intended to catch malicious code writers who are costing businesses billions each year.

Law enforcement agencies welcomed the help, and security experts said such rewards may produce good leads. But some IT managers said last week that Microsoft could

find better ways to spend the money.

"I would rather see Microsoft make a solid investment in prevention and containment" of viruses, said Connie Sadler, IT security director at Brown University in Providence, R.I. As it is, it's up to users to build barriers that limit the damage from a virus or worm, she said.

Brown has network firewall rules that prevent one dorm from communicating with another if a problem occurs, said Sadler. "It would be nice to see some network operating system that would help us do that," she said.

Hugh McArthur, informa-

tion security officer at McLean, Va.-based Online Resources Corp., an online bill-processing firm, also had doubts about the reward program's effectiveness. "It does not address the underlying issue that the vulnerabilities that the worms and viruses attack still exist," he said. "The resources might be better spent fighting those problems than going after [virus writers]."

Multiple Fronts

Microsoft officials said the reward fund, announced last week, isn't a substitute for improving the security of its Windows software, which remains the company's top secu-

rity priority. The reward program was spawned in recognition that the company needs "to move on multiple fronts" to address the problems, said Brad Smith, Microsoft's general counsel.

There's no question that the problem is a huge one. According to security software maker Symantec Corp., 450 new viruses and worms are released each month. Most are written by males age 14 to 24, said Carey Nachenberg, chief architect at the Cupertino, Calif.-based company. "The majority of those threats are targeting the Windows platform," he said.

Computer Economics Inc., a Carlsbad, Calif.-based consultancy, estimates that virus attacks will cost businesses worldwide \$12.5 billion this year, a figure expected to rise to \$14 billion next year. That includes costs related to busi-



ness interruptions and IT security service purchases, among other factors.

Law enforcement officials from the FBI and U.S. Secret Service joined Microsoft in announcing the program but offered no prediction on its success.

The first two rewards were set at \$250,000 each for the authors of the MSBlaster. A worm and the Sobig virus. Some security analysts said the rewards may encourage independent computer experts, hackers, corporate IT professionals and others to undertake detective work. If a malicious code author "did it for bragging rights, or as a general 'experiment,' then there is a chance that a reward might turn up leads," said Eugene Spafford, director of the Center for Education and Research in Information Assurance and Security at Purdue University in West Lafayette, Ind.

Rewards programs have been successful for the FBI and other law enforcement agencies and should work well in the digital realm, said Patrick Gray, a former FBI agent and head of the emergency response team at Atlanta-based Internet Security Systems.

"It's unfortunate that things have come to this," Gray said. "But it's time to stop focusing only on the buggy software and go after the criminal elements that exploit [it] as well."

© 42670

Microsoft's new bounty program is a sign that the company is taking a new look at some of the issues in the case. "I think the settlement is in doubt," said Lande.

Tom Reilly, attorney general of Massachusetts, said after the hearing that Microsoft wasn't held accountable by the settlement with the Bush administration. "They still don't get it," Reilly said of Microsoft. "They don't think they have done anything wrong."

But Brad Smith, Microsoft's general counsel, said the company has acknowledged the court findings about its actions. He also said Microsoft has "been very clear in rebuilding and refashioning our relationship with the rest of the industry." © 42671

Microsoft Antitrust Case Could Still Benefit Linux

Opponents ask for tougher restrictions

BY PATRICK THIRDEDALE
WASHINGTON

Throughout the 5-year-old Microsoft Corp. antitrust case, one of the chief potential rivals to Windows' dominance cited in court arguments has been Linux. And that was true again last week, when opponents of the 2001 Bush administration settlement with Microsoft returned to appeal that ruling.

The sole holdout state, Massachusetts, asked the court to impose remedies that it contends are needed to help Windows rivals, which essentially means Linux. The state, which was the first to seek action against Microsoft, wants the settlement to require the Microsoft Office suite to be ported to Linux.

"In today's environment, Office is the [key] to the barrier of entry for commercial users," said Steven Kuny, the attorney representing Massa-

chusetts at a U.S. Court of Appeals hearing last week on the settlement.

That's not all Massachusetts wants. Its remedy proposal would also require an open-source version of Internet Explorer, as well as provisions to ensure that Windows includes Java.

Two trade groups, the Computer & Communications Industry Association and the Software & Information Industry Association, which represent Microsoft's competitors, are also challenging the settlement.

Pointed Questions

Whether the court will send the case back to U.S. District Judge Colleen Kollar-Kotelly is the current question. The six judges who heard arguments were dispassionate but pointed in their questions, focusing on issues that have been central to the case: the



commingling of Internet Explorer's code with the operating system, the adequacy of application programming interface disclosures needed to ensure application interoperability with the Windows operating system, and whether the remedy addressed any gains by Microsoft from its anticompetitive conduct.

Bill Claybrook, an analyst at Aberdeen Group Inc. in Boston, said porting Office to Linux would give the open-source operating system a big boost because of the importance of Office in enterprises.

"I think you would see a huge uptake in Linux use on

the desktop," he said. Microsoft would still be owed a licensing fee, but even with that, Claybrook believes IT managers would be more inclined to consider Linux.

The judges spent little time on the government's argument that courts usually give deference to government antitrust settlements, said Bob Lande,

an antitrust professor at the University of Baltimore School of Law, who took that as a sign that the court is taking a new look at some of the issues in the case. "I think the settlement is in doubt," said Lande.

Tom Reilly, attorney general of Massachusetts, said after the hearing that Microsoft wasn't held accountable by the settlement with the Bush administration. "They still don't get it," Reilly said of Microsoft. "They don't think they have done anything wrong."

But Brad Smith, Microsoft's general counsel, said the company has acknowledged the court findings about its actions. He also said Microsoft has "been very clear in rebuilding and refashioning our relationship with the rest of the industry." © 42671

THOUGHTS ON THE BOUNTY
International expert Internet IT attorney weighs in on Microsoft's bounty plan
Q: ask.com/42674

Virus writers respond (hearsay won't be believed by Microsoft's reward offer, but two new writers are out there)

Q: ask.com/42680
www.computerworld.com

Microsoft Puts Up \$5M Bounty To Nab Malicious Code Writers

Virus attacks will cost businesses \$12.5B this year

BY PATRICK THIBODEAU AND
JAIKUMAR VIJAYAN
WASHINGTON

The top target of virus writers, Microsoft Corp., is taking the offensive with a \$5 million reward fund intended to catch malicious code writers who are costing businesses billions each year.

Law enforcement agencies welcomed the help, and security experts said such rewards may produce good leads. But some IT managers said last week that Microsoft could

find better ways to spend the money.

"I would rather see Microsoft make a solid investment in prevention and containment" of viruses, said Connie Sadler, IT security director at Brown University in Providence, R.I. As it is, it's up to users to build barriers that limit the damage from a virus or worm, she said.

Brown has network firewall rules that prevent one form from communicating with another if a problem occurs, said Sadler. "It would be nice to see some network operating system that would help us do that," she said.

Hugh McArthur, informa-

tion security officer at McLean, Va.-based Online Resources Corp., an online bill-processing firm, also had doubts about the reward program's effectiveness. "It does not address the underlying issue that the vulnerabilities that the worms and viruses attack still exist," he said. "The resources might be better spent fixing those problems than going after [virus writers]."

Multiple Fronts

Microsoft officials said the reward fund, announced last week, isn't a substitute for improving the security of its Windows software, which remains the company's top secu-

rity priority. The reward program was spawned in recognition that the company needs "to move on multiple fronts" to address the problem, said Brad Smith, Microsoft's general counsel.

There's no question that the problem is a huge one. According to security software maker Symantec Corp., 450 new viruses and worms are released each month. Most are written by males age 14 to 24, said Carey Nichenberg, chief architect at the Capertown, Calif.-based company. "The majority of those threats are targeting the Windows platform," he said.

Computer Economics Inc., a Carlsbad, Calif.-based consultancy, estimates that virus attacks will cost businesses worldwide \$12.5 billion this year, a figure expected to rise to \$14 billion next year. That includes costs related to busi-

WANTED

■ **MSHADO.A worm author**
REWARD: \$250,000 for arrest and conviction

■ **Sobig virus author**
REWARD: \$250,000 for arrest and conviction

ness interruptions and IT security service purchases, among other factors.

Law enforcement officials from the FBI and U.S. Secret Service joined Microsoft in announcing the program but offered no prediction on its success.

The first two rewards were set at \$250,000 each for the authors of the MSHADO.A worm and the Sobig virus. Most security analysts said the rewards may encourage independent computer experts, hackers, corporate IT professionals and others to undertake detective work. "If a malicious code author 'did it for bragging rights, or as a general experiment, then there's a chance that a reward might turn up leads," said Eugene Spafford, director of the Center for Education and Research in Information Assurance and Security at Purdue University in West Lafayette, Ind.

Rewards programs have been successful for the FBI and other law enforcement agencies and should work well in the digital realm, said Patrick Gray, a former FBI agent and head of the emergency response team at Atlanta-based Internet Security Systems.

"It's unfortunate that things have come to this," Gray said. "But it's time to stop focusing only on the buggy software and go after the criminal elements that exploit [it] as well." ■ 42670

THOUGHTS ON THE BOUNTY

Microsoft's offer to reward those who help it identify authors of an on-Microsoft's security bounty

QuickLink 42614

For information on Microsoft's reward offers, see two virus authors

QuickLink 42665
www.computerworld.com

Microsoft Antitrust Case Could Still Benefit Linux

Opponents ask for tougher restrictions

BY PATRICK THIBODEAU
WASHINGTON

Throughout the 5-year-old Microsoft Corp. antitrust case, one of the chief potential rivals to Windows' dominance cited in court arguments has been Linux. And that was true again last week, when opponents of the 2001 Bush administration settlement with Microsoft returned to appeal that ruling.

The sole holdout state, Massachusetts, asked the court to impose remedies that it contends are needed to help Windows rivals, which essentially means Linux. The state, which was the first to seek action against Microsoft, wants the settlement to require the Microsoft Office suite to be ported to Linux.

"In today's environment, Office is the [key] to the barrier of entry for commercial users," said Steven Kury, the attorney representing Massa-

chusetts at a U.S. Court of Appeals hearing last week on the settlement.

That's not all Massachusetts wants. Its remedy proposal would also require an open-source version of Internet Explorer, as well as provisions to ensure that Windows includes Java.

Two trade groups, the Computer & Communications Industry Association and the Software & Information Industry Association, which represent Microsoft's competitors, are also challenging the settlement.

Pointed Questions

Whether the court will send the case back to U.S. District Judge Colleen Kollar-Kotelly is the current question. The six judges who heard arguments were dispassionate but pointed in their questions, focusing on issues that have been central to the case: the

Opponents of the government's settlement with Microsoft asked the U.S. Court of Appeals to seek tougher remedies.

Court could require the case to be open source for new remedies, or it could affirm the settlement and effectively end the case.

Ruling is months away

compingling of Internet Explorer's code with the operating system, the adequacy of application programming interface disclosures needed to ensure application interoperability with the Windows operating system, and whether the remedy addressed any gains by Microsoft from its anticompetitive conduct.

Bill Claybrook, an analyst at Aberdeen Group Inc. in Boston, said pointing Office to Linux would give the open-source operating system a big boost because of the importance of Office in enterprises.

"I think you would see a huge uptake in Linux use on

the desktop," he said. Microsoft would still be owed a licensing fee, but even with that, Claybrook believes IT managers would be more inclined to consider Linux.

The judges spent little time on the government's argument that courts usually give deference to government antitrust settlements, said Bob Lande, an antitrust professor at the University of Baltimore School of Law, who took that as a sign that the court is taking a new look at some of the issues in the case. "I think the settlement is in doubt," said Lande.

Tom Reilly, attorney general of Massachusetts, said after the hearing that Microsoft would not hold accountable by the settlement with the Bush administration. "They still don't get it," Reilly said of Microsoft. "They don't think they have done anything wrong."

But Brad Smith, Microsoft's general counsel, said the company has acknowledged the court findings about its actions. He also said Microsoft has "been very clear in rebuilding and refashioning our relationship with the rest of the industry." ■ 42671

BOEFS

Microsoft Issues Bug Fix for Office

Microsoft Corp. issued a "critical" update for Office System 2003, less than a month after releasing the software. The update is designed to fix a bug that can cause problems when users open PowerPoint, Word or Excel files containing OfficeArt elements saved in an earlier version of Office. Microsoft said the flaw wasn't found in beta-testing because it "was limited to such a small number of customers."

Cisco Sees Rise In Sales, Net Income

Cisco Systems Inc. reported a 5% year-over-year increase in revenue and a 76% jump in net profit for its first quarter, which ended Oct. 25. CEO John Chambers said a recovery in demand "appears to be slowly gaining momentum but is still fragile in the minds of our customers."

BY THE NUMBERS
REVENUE PROFIT

Q1 2003

Q1 2004

IBM Offers Lotus Tools as a Suite

IBM announced a software suite, called Lotus Workplace, that integrates four messaging, collaboration and content management applications. The products have a single user interface and include common navigation features, IBM said. In a separate announcement, the company said it has bundled a set of PC management services into an offering called IBM WorkPlace.

Short Takes

AVAYA INC. said it will develop converged networking products with EXTREME NETWORKS INC. and resell Extreme's switches. ... BMC SOFTWARE INC. announced a tool for managing mainframe databases from its Web-based SmartDBA console.

MARK JEWELL • ON THE MARK

No-frills VoIP Project Slashes Costs ...

... at bottom-line-bleeding Agilent Technologies Inc. The Palo Alto, Calif.-based maker of scientific and engineering test equipment has been hemorrhaging cash since the 2001 downturn of the once-hot telecom market. Word inside the \$6 billion company is to **cut costs everywhere**. For a global company with major operations centers in North America, Europe and Asia, a good place to start was the phone bill,

says Pete Kimball, a voice network engineer at Agilent. Unlike an angry parent who yanks a phone out of a teenager's room after seeing the costs rung up by the yanking kid, Agilent's engineers did what engineers do: They conducted a study. Their first discovery, not surprisingly, was that virtually all long-distance intracompany calls took place in locations where IP networks were running.

The second discovery was that up to 75% of the company's phone conversations were internal conference calls.

Those two facts lit up bright-idea bulbs over lots of heads, and the company swung into action in September to add voice-over-IP gateways to private branch exchanges in eight of its nine global centers. The first phase of the deployment will be completed this month. "We've done nothing extraordinary," says Kimball. "It's a straightforward design." Maybe. But the amount of money saved is extraordinary. Agilent

will pocket about \$1 million in savings in the first year, hitting ROI in about the same time. The second phase of the VoIP project, which attacks voice user-franchise operations in places like China and India, will also be rolled out this year, delivering even more savings. • Agilent's choice for VoIP technology was Latitude Communications Inc. Users like the Santa Clara, Calif.-based company's MeetingPlace software, which is designed to let them have live, interactive online meetings syn-

Path Patterns

Agilent Networks' new Philadelphia tomorrow releases Version 2.2 of its Route Dynamics software for its IP management appliances. With the upgrade, you can be applications and services to specific routing paths for ideal performance and get alerts when those preferred baseline paths are by passed. Pricing is based on the number of Layer 3 devices on your network.

chronized with VoIP and use tools like instant messaging and PowerPoint during meetings. Latitude's Create 2.0 turns PowerPoint into Flash demos for zippy performance online. Latitude is so enamored with Flash that it will **replace its current Java Web conferencing engine** with Flash sometime in mid-2004. By the end of this quarter, Latitude will give managers a detailed audit trail for IM usage, which is of particular interest to those needing to comply

with SEC, HIPAA and other data retention and control regulations. • Accessing DB2 tables on your mainframe can make certain operations a bit pesky. The folks at Data Kinetics Ltd. in Ottawa claim that tableBase Version 6, which ships today, can perform database table reads for DB2 on z/OS and OS/390 hosts **faster than if you put all of DB2 in cache**. What's more, with the new release, you can share IMS and DB2 tables on a single system and write to the tables. The upgrade also lets DB2-stored procedures make calls to tableBase, which cuts down on mainframe I/O operations and increases performance. Pricing is MIPS-based. • Data integrity is paramount to virtually any database's credibility. That's why database administrators are very particular about who can read and, especially, write data to their prized workhorse. **Not so at Gracemote Inc.** Emeryville, Calif.-based Gracemote supplies the information about songs accessed by users of Apple Computer Inc.'s iTunes music service. When you download your favorite **Coldplay hit or Wagnerian** or load a music CD on your PC, the data connected to the song has most likely been provided by users like you. According to Chief Technology Officer Ty Roberts, Gracemote has hit upon an intriguing scheme that lets any user **classify music**, for example, by genre in a democratic fashion. "Users fill out data on the tracks, and we buffer it on our servers," he explains. Music companies don't provide the information. Once multiple people confirm, say, that "Ozzy Osbourne" by Hollywood Fats Band is blues and not rock, Gracemote publishes it to the world. This approach has implications for database administrators who may have fields with subjective information in them. Instead of choosing for your users, let them vote. **Democratize the database!** A catchy slogan for 2004, no? **42647**

SAP Upgrades Portal, Widens OS Support

BY MARC L. SONNINI

SAP AG last week released an upgrade of its portal software that runs on operating systems other than Windows NT and includes real-time collaboration tools, such as an instant messaging service.

Greg Crider, director of product marketing for SAP Enterprise Portal, said Version 6.0 of the software supports newer Windows releases as well as the major versions of UNIX. SAP also updated the number of supported lan-

guages from seven to 20 and added Web-based application sharing and virtual collaboration room capabilities in addition to instant messaging, Crider said.

To ease installation, SAP is bundling in adapters and pre-defined business rules designed to let users quickly book applications to the portal. Content management and data categorizing and retrieval tools are also being added.

Lufthansa AG, which runs human resources, finance and

other applications developed by SAP began using the new portal software in July as an early adopter. Thomas Endres, Lufthansa's CIO, said a full rollout is due to be completed early next year and will give the German airline a backbone to support wide-ranging collaborative processes.

For instance, Endres wants to use the portal to let Lufthansa's software developers share and reuse code. He's also looking to combine the company's various intranets

to reduce server costs.

SAP has promised to integrate the portal software with third-party applications, according to Endres. "That's a key message I rely on," he said, adding that Lufthansa is using Enterprise Portal with non-SAP products such as Documentum Inc.'s document management software.

Laura Ramos, an analyst at Forrester Research Inc., said Version 6 isn't a huge step beyond SAP's existing software. But it provides a foundation for future releases of SAP's xApps cross-applications technology, she said. **42638**

BRIEFS

Microsoft Issues Bug Fix for Office

Microsoft Corp. issued a "critical" update for Office System 2003, less than a month after releasing the software. The update is designed to fix a bug that can cause problems when users open PowerPoint, Word or Excel files containing OfficeArt elements saved in an earlier version of Office. Microsoft said the flaw wasn't found in beta-testing because it "was limited to such a small number of customers."

Cisco Sees Rise In Sales, Net Income

Cisco Systems Inc. reported a 5% year-over-year increase in revenue and a 78% jump in net profit for its first quarter, which ended Oct. 25. CEO John Chambers said a recovery in demand "appears to be slowly gaining momentum but is still fragile in the minds of our customers."

BY THE NUMBERS:

| | | |
|---------|---------|---------|
| Q1 2003 | \$4,958 | \$516M |
| Q1 2004 | \$5,100 | \$1,090 |

IBM Offers Lotus Tools as a Suite

IBM announced a software suite, called Lotus Workplace, that integrates file messaging, collaboration and content management applications. The products have a single user interface and include common navigation features, IBM said. In a separate announcement, the company said it has bundled a set of PC management services into an offering called IBM WorkPlace.

Short Takes

AKIVA INC. said it will develop converged networking products with **EXTREME NETWORKS INC.** and **Real Estate Extreme's** subsidiaries. ... **EMC SOFTWARE INC.** announced a tool for managing mainframe databases from its Web-based SmartDBA console.

MARK HALL • ON THE MARK

No-frills VoIP Project Slashes Costs ...

... at bottom-line-bleeding Agilent Technologies Inc. The Palo Alto, Calif.-based maker of scientific and engineering test equipment has been hemorrhaging cash since the 2001 downturn of the once-hot telecom market. Word inside the \$6 billion company is to **cut costs everywhere**. For a global company with major operations centers in North America, Europe and Asia, a good place to start was the phone bill.

says Pete Kimball, a voice network engineer at Agilent. Unlike an angry parent who yanks a phone out of a teenager's room after seeing the costs run up by the racking kid, Agilent's engineers did what engineers do. They conducted a study. Their first discovery, not surprisingly, was that virtually all long-distance intracompany calls took place in locations where IP networks were running. The second discovery was that up to 75% of the company's phone conversations were internal conference calls.

Those two facts lit up bright-idea bulbs over lots of heads, and the company swung into action in September to add voice-over-IP gateways to private branch exchanges in eight of its nine global centers. The first phase of the deployment will be completed this month. "We've done nothing extraordinary," says Kimball. "It's a straightforward design." Maybe. But the amount of money saved is extraordinary. Agilent

will pocket about \$1 million in savings in the first year, hitting ROI in about the same time. The second phase of the VoIP project, which attacks voice over frame-relay operations in places like China and India, will also be rolled out this year, delivering even more savings. Agilent's choice for VoIP technology was Latitude Communications Inc. Users like the Santa Clara, Calif.-based company's MeetingPlace software, which is designed to let them have live, interactive online meetings synchronized with VoIP and use tools like instant messaging and PowerPoint during meetings. Latitude's iCreate 2.0 turns PowerPoint into Flash demos for zippy performance online. Latitude is so enamored with Flash that it will replace its current Java Web conferencing engine with Flash sometime in mid-2004. By the end of this quarter, Latitude will give managers a detailed audit trail for IM usage, which is of particular interest to those needing to comply

with SEC, HIPAA and other data retention and control regulations. • Accessing DB2 tables on your mainframe can make certain operations a bit poky. The folks at Data Kinetics Ltd. in Ottawa claim that tableBase Version 6, which ships today, can perform database table reads for DB2 on iSeries and OS/390 hosts faster than if you put all of the DB2 in cache. What's more, with the new release, you can share IMS and DB2 tables on a single system and write to the tables. The upgrade also lets DB2-stored procedures make calls to tableBase, which cuts down on mainframe I/O operations and increases performance. Pricing is MIPS-based. • Data integrity is paramount to virtually any database's credibility. That's why database administrators are very particular about who can read and, especially, write data to their prized workbooks. Not so at **Greencore Inc.** Emeryville, Calif.-based Greencore supplies the information about songs accessed by users of Apple Computer's iTunes music service. When you download your favorite **Coltrane hit** or **Wagnerian aria** or load a music CD on your PC, the data connected to the song has most likely been provided by users like you. According to Chief Technology Officer Ty Roberts, Greencore has hit upon an intriguing scheme that lets users easily classify music, for example, by genre in a democratic fashion. "Users fill out data on the tracks, and we buffer it on our servers," he explains. Music companies don't provide the information. Once multiple people confirm, say, that "Okie Dokie Stomp" by Hollywood Fats Band is blues and not rock, Greencore publishes it to the world. This approach has implications for database administrators who may have fields with subjective information in them. Instead of choosing for your users, let them vote. **Democratize the database!** A catchy slogan for 2004, no? **#42647**

SAP Upgrades Portal, Widens OS Support

BY MARC L. BORDINI

SAP AG last week released an upgrade of its portal software that runs on operating systems other than Windows NT and includes real-time collaboration tools, such as an instant messaging service.

Greg Crider, director of product marketing for SAP Enterprise Portal, said Version 6 of the software supports newer Windows releases as well as the major versions of Unix. SAP also upped the number of supported lan-

guages from seven to 20 and added Web-based application sharing and virtual collaboration room capabilities in addition to instant messaging. Crider said.

To ease installation, SAP is bundling in adapters and pre-defined business rules designed to let users quickly hook applications to the portal. Content management and data categorizing and retrieval tools are also being added.

Latitude AG, which runs human resources, finance and

other applications developed by SAP, began using the new portal software in July as an early adopter. Thomas Endres, Latitude's CEO, said a full rollout is due to be completed early next year and will give the German airline a backbone to support wide-ranging collaborative processes.

For instance, Endres wants to use the portal to let Luft-hansa's software developers share and reuse code. He's also looking to combine the company's various intranets

to reduce server costs.

SAP has promised to integrate the portal software with third-party applications, according to Endres. "That is a key message I rely on," he said, adding that Luft-hansa is using Enterprise Portal with non-SAP products such as Documentum Inc.'s document management software.

Laura Ramos, an analyst at Forrester Research Inc., said Version 6 isn't a huge step beyond SAP's existing software. But it provides a foundation for future releases of SAP's Ajax cross-application technology, she said. **#42638**

EllisIsland.org Welcomes 70 Million Visitors a Month With Oracle, HP and Red Hat



More than 70 million monthly visitors look for their past
with the IT infrastructure of the future:
HP Adaptive Enterprise Solutions,
Red Hat Enterprise Linux,
and Oracle Database.

ORACLE

oracle.com/hp
or call 1.800.633.0753

Users Still Leery of Switch To Voice-over-IP Systems

Cite uncertainties about cost savings, ROI of new apps

BY MATT HAMBLEN
BOSTON

NETWORKING vendors point to continued growth in the adoption of voice-over-IP technology. But several users last week said they're still skeptical about VoIP's ability to deliver cost savings and the potential value of new applications that it makes possible.

"We've been studying VoIP for two years, and we aren't sure the cost is justified," said Jeff Scott, a communications project analyst at Indianapolis-based St. Vincent Hospital and Health Care Center Inc., which operates more than 80 medical facilities in Indiana.

Still, Scott and a colleague said they got some encouraging insights for their potential VoIP project at the Next Generation Networks conference here last week. St. Vincent has been calculating an estimate for the project based on an expected need to add quality-of-service software and new switches to its network. But the two IT staffers were told at a tutorial that the QoS expense might not be necessary. The health care company plans to continue its evaluation "because everybody is doing [VoIP]," Scott said.

Skeptics Speak

Scott and his co-worker weren't deterred by skepticism that was voiced during a lunch table discussion by two VoIP adopters who work at financial services firms based in the Northeast.

Both users asked that neither they nor their companies be identified. One said a yearly rollout of VoIP technol-

ogy to hundreds of workers at his company is being praised by the IT managers who conceived the project. But it gets low marks from many end users who say that call forwarding and other call routing functions "just don't work all the time," he added.

The primary benefit of the VoIP system is that it now costs less than it once did to relocate end users or add new ones. Employees now can set up service at different PC-based phones with a few keystrokes instead of waiting

for a technician to do hours of work.

The second IT manager from a financial services firm said a trial project showed that the required investment

wasn't cost-effective when judged purely on the financial ramifications of converting analog and digital phones to VoIP equipment. But he plans to continue testing the technology for vendor-touted applications like voice interpretation of e-mail text, video links, virtual whiteboard tools and voice connections over PCs.

CONNECTION TIME

For more, head to our Networking Knowledge Center at QuickLink.k12000.com

Harvard University began an initial VoIP rollout in June for about 200 end users but isn't seeing much cost savings over its previous telecommunications system, said Scott Reader, a senior technical consultant at the school.

Bradner added that configuring the VoIP equipment supplied by Cisco Systems Inc. has been "difficult." But he predicted that the cost savings will increase as the new system is rolled out to a larger group of users.

John Tili Johnson, president of Nemertes Research LLC in New York, said 31 of 50 large companies she surveyed



SOURCE: NEMERTES RESEARCH LLC, NEW YORK

this year reported that they're using VoIP technology.

"Effective cost-justification is a major challenge," Johnson said. But the survey showed that VoIP systems are about 22% less expensive to operate than circuit-switched networks, she said, adding that her research wasn't sponsored by any IT vendors. **Q 42876**

Lower Telecom Prices Expected as MCI Exits Bankruptcy

CEO pledges not to start price war but says vendor will 'protect our territory'

BY MATT HAMBLEN

With MCI poised to emerge from Chapter 11 bankruptcy protection early next year, users and analysts last week predicted lower prices for voice and data networking services, if not an outright price war.

MCI officials have sought to dispel such talk since U.S. Bankruptcy Court Judge Arthur Gonzalez approved the company's financial reorganization plan on Oct. 31. CEO Michael Capellas said after the ruling that MCI already faces "a brutal pricing environment." Capellas vowed not to start a price war with rivals like AT&T Corp. and Verizon Communications, although he added that MCI "will protect our territory, and we will be competitive."

Vinton Cerf, senior vice president of technology strategy at MCI, last week said in an interview that it would be "silly to initiate a price war

and make up revenues in volume." He said that as voice revenues decline for all telecommunications vendors, MCI will put even more emphasis on IP network services and "increase the range and function of products and services we offer."

But several analysts said there is room for MCI, which is still legally known as WorldCom Inc., to drop prices, and some users also see cost reductions ahead. Asked if he thinks prices will fall as MCI comes out of bankruptcy, Jeff Scott, a communications project analyst at St. Vincent Hospital and Health Care Center Inc. in Indianapolis, said, "You'd hope."

The Downside

Jack Pavelko, lead telecommunications analyst at chemicals maker BASF Corp. in Mount Olive, N.J., also predicted that MCI's emergence with lowered debt will result in offers

of lower prices for voice and data services. Pavelko said that would put pressure on competitors to drop their prices as well, but he lamented such a possibility.

"Already, we get no customer service from carriers, and now they'll be fighting over fractions of pennies," Pavelko said, referring to per-minute cost of long-distance voice services. "Not in my lifetime will I ever work with MCI. They deflated prices for three years, and their emergence from bankruptcy will push the market into further chaos."

BASF currently spends

“Already, we get no customer service from carriers, and now they'll be fighting over fractions of pennies.”

JACK PAVELKO, LEAD TELECOMMUNICATIONS ANALYST, BASF CORP.

about \$28 million annually with Sprint Corp. and AT&T for voice and data services.

MCI made a short presentation at BASF last month, but Pavelko said he wasn't impressed by the sales pitch.

Howard Anderson, senior managing director of YankeeTek Ventures in Cambridge, Mass., and founder of The Yankee Group market research firm, said that demand for long-distance voice services is diminishing and that some users can already get prices of 1 cent per minute.

"You can't get much cheaper than that," Anderson said. "There might not be an actual price war, but as MCI emerges, it will start more competition on pricing. MCI is still respected."

AT&T spokesman John Heith said that whatever MCI does on pricing for a wide range of voice and data services, AT&T will keep pace. "We've been able to compete with MCI very effectively when they were cheating in the past, and we'll continue to do so," Heith said. **Q 42857**

FREE White Paper!

"Determining Total Cost of Ownership for Data Center and Network Room Infrastructure"

Just read or fax this completed coupon or contact APC for your FREE white paper, "Determining Total Cost of Ownership for Data Center and Network Room Infrastructure."

Also receive our FREE "InfoStructure" brochure. Better yet, order both today at the APC Web site!

<http://promo.apc.com>

(888) 289-APCC x2952 • FAX: (401) 708-2797

APC
Legendary Reliability®

Key Code
0179y

FREE White Paper "Determining Total Cost of Ownership for Data Center and Network Room Infrastructure"

- ☐ **YES!** Please send me my FREE white paper and InfoStructure® brochure.
☐ **NO.** I'm not interested at this time, but please add me to your mailing list.

Name _____ Title _____
 Company _____
 Address _____ Address 2 _____
 City/Town _____ State _____ Zip _____ Country _____
 Phone _____ Fax _____ E-mail _____

☐ **Yes!** Send me more information via e-mail and sign me up for APC PowerAlerts e-mail newsletter. Key Code 0179y

What type of availability solution do you want?

- ☐ UPS 15-18kVA (single phase) ☐ UPS 19-30kVA (3-phase AQ) ☐ UPS 30-150kVA (3-phase AQ) ☐ DC Power
☐ Network Enclosures and Racks ☐ Precision Air Conditioning ☐ Monitoring and Management
☐ Cable/Wire ☐ Mobile Protection ☐ Surge Protection ☐ UPS Upgrade ☐ Don't know

Purchase Manufacturer? ☐ <1 Month ☐ 1-3 Months ☐ 3-12 Months ☐ 1 Yr. Plus ☐ Don't know

You are located in: ☐ Home/Home Office ☐ Business <100 employees ☐ Large Corp. >100 employees

☐ Gov't, Education, Public Org. ☐ APC Centers & Partners

©2002 APC. All trademarks are the property of their owners. 020209 US • E-mail: apcc@apc.com • 100 Technology Road, Avon, MA 01901 USA

**BUSINESS REPLY MAIL**

FIRST-CLASS MAIL PERMIT NO. 36 WEST KINGSTON RI

POSTAGE WILL BE PAID BY ADDRESSEE



ATTENTION CRC: 0179y
Department: B
132 FAIRGROUNDS ROAD
PO BOX 278
WEST KINGSTON RI 02892-9920

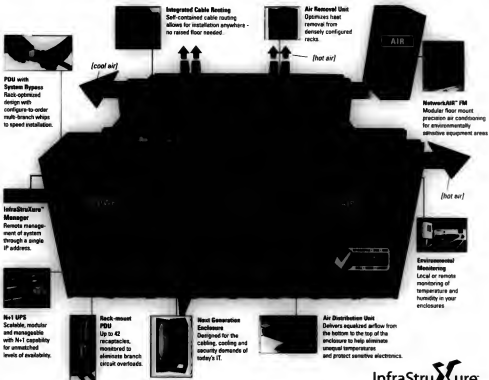


NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

**How to Contact APC****Call: (888) 289-APCC***use the extension on the reverse side***Fax: (401) 788-2797****Visit: <http://promo.apc.com>***use the key code on the reverse side*

APC
Legendary Reliability™

If they come, you will build it.



Pay as you grow with new InfraStruXure™ architecture.



Traditional data centers are built out for future capacity and require a large amount of floor space that could be otherwise utilized. High power density racks create dangerous hot spots.

InfraStruXure™ lets you build out capacity only as it's required. Saves up to 50% CAPEX and 20% OPEX, and enables an average of 30% usable space. InfraStruXure AIR delivers cooling directly where it's needed, eliminating dangerous hot spots.

InfraStruXure™ is the industry's only patent-pending, on-demand, network-critical physical infrastructure (NCPI).

Build out capacity only as it's required with InfraStruXure's open, adaptable and integrated approach. Select standardized components to create your own customized solution.

Finally, you can target availability, pay as you grow, adapt to change and maximize efficiency while minimizing installation, operating, service and maintenance costs.

To find out more visit us online at www.apc.com, or see below to get your free InfraStruXure brochure and white paper today.

*Representative savings based on projected power infrastructure build-out costs and estimated service cost per unit. Actual savings may vary.

InfraStruXure
POWER RACK AIR

Open, adaptable and integrated architecture for on-demand network-critical physical infrastructure



Winner of the Communications Solutions Magazine's "2002 Product of the Year" award

APC
Legendary Reliability™

FREE White Paper on "Determining Total Cost of Ownership for Data Center and Network Room Infrastructure" and Free InfraStruXure™ Brochure

Visit <http://promo.apc.com> Key Code a179y • Call 888-289-APCC x2992 • Fax 401-788-2797

©2003 American Power Conversion Corporation. All trademarks are the property of their owners. E-mail: us.support@apcc.com • 132 Fairgrounds Road, West Kingston, RI 02892-USA ISO9001:2002

Product availability varies by region. Go to: www.apc.com for current information.

3 SERVERS ARE ABOUT TO GO DOWN.

ONE OF THEM WILL LOSE 200
CUSTOMERS PER MINUTE.





CAN YOUR SOFTWARE TELL YOU WHICH ONE?

Business Service Management solutions from BMC Software® can. In fact, they let you predict critical performance problems and resolve them before they ever impact your business. And you can prioritize IT management, investments and resource allocations to optimize your business performance. So you can solidly align your IT investments with strategic business goals. And protect the delivery of vital business

services like sales, customer service, online transactions, logistics and distribution—whatever is most critical to your company's success. It's enterprise management software that works with your existing IT resources to let you manage what matters from a business perspective and execute with precision. Find out how at www.bmc.com/bsm2



BRIEFS

Sun Plans to Offer Third-Party Tools

Sun Microsystems Inc. said it plans to include third-party products in its two software bundles. It sells under a per-employee licensing scheme announced in September [QuickLink 41523]. Initial deals with software vendors are due to be disclosed at the company's SunNetwork conference in Berlin next month. Sun also set a price of \$50 per security member or administrator for academic institutions that buy its Java Enterprise System tools.

Red Hat Launches Linux Testbed

Red Hat Inc. released the first version of an unsupported Linux distribution designed to serve as a testbed for the open-source software. The addition of the Fedora Core 1 release is part of a plan unveiled last week that Red Hat, a Columbus, Ohio-based company, is dropping its basic Linux product in order to focus on its Red Hat Enterprise Linux technology [QuickLink 40133].

PeopleSoft Gets OK To Go After Oracle

A state court judge in California ruled that PeopleSoft Inc. can proceed with a libel and unfair competition lawsuit it filed against Oracle Corp. in June. Judge Ronald Sabers said PeopleSoft hasn't shown that Oracle knowingly interfered with specific customer relationships but could still add evidence of such interference to its complaint. PeopleSoft filed the suit after Oracle began its hostile bid to buy the company.

Short Takes

Sunnyvale, Calif.-based NETWORK APPLIANCE INC. is buying Pittsburgh-based storage vendor SPINMAKER NETWORKS LLC in a stock-swap deal. . . . NETWORK ASSOCIATES INC., in Santa Clara, Calif., said it has lowered its revenue by a total of \$122.6 million during back to 1999.

New Laws to Drive '04 Security Agenda

Devising policies trumps technology

BY JAKUBIAN VILKIN
WASHINGTON

THE NEED to comply with an array of complex data laws will dominate the security agenda in 2004, according to attendees at the Computer Security Institute conference here last week.

As in previous years, IT security managers expect to spend considerable time and resources finding out destructive intrusions and insider threats.

But the most daunting challenge will be dealing with laws such as the Sarbanes-Oxley Act, the Gramm-Leach-Bliley Act, California's SB 1386 privacy law and international data integrity and privacy laws, they said. As a result, the emphasis will be on issues such as policy management and enforcement, benchmarking against standards, incident response, forensics and monitoring for insider threats.

"As far as my business and industry in general goes, the single biggest driver in compliance with all the new data and privacy laws," said Michael Kamens, global network security manager at Thermo Electron Corp., a \$2 billion manufacturer of scientific equipment in Waltham, Mass.

As a publicly traded U.S. manufacturer with multinational operations, Thermo has to deal with compliance issues ranging from Sarbanes-Oxley to a Chinese encryption requirement that involves filling out forms in Mandarin. "It is requiring me to quadruple the effort that I have to put in on a daily basis to ensure that my company is in compliance and that I'm safeguarding its good name," Kamens said.

United Government Services LLC, a Milwaukee-based provider of administrative and consulting services for public funded health care systems, is governed by 400 security requirements issued by the Centers for Medicare and Medicaid Services. Meeting all

TO DO LIST

Top Priorities for CSOs

- Establishing a privacy office.
- Building up global security policies, baseline practices and local procedures for enforcement.
- Assessing application security.
- Monitoring for compliance.
- Benchmarking against standards.
- Building incident response data and evidence.

SOURCE: NATION'S LARGEST CENTER FOR DIGITAL FORENSICS STUDIES

of them will be a "very large driver" of security efforts next year, said systems security officer Todd Fitzgerald.

For the most part, the efforts will focus not on technology improvements but on implementing security policies and management processes to ensure regulatory compliance. "It's a process that will involve spending a lot more time working with man-

agement and end users, educating them on what the security risks are," Fitzgerald said.

Third-party connectivity issues are a priority at St. Jude Medical Inc. in St. Paul, Minn.

As a \$1.6-billion manufacturer of cardiovascular equipment, with 15 facilities worldwide and customers in 120 countries, St. Jude has to make sure it avoids liability for security breaches involving its supply chain or business partners, said David Stacey, global IT security director.

"Regulation is a massive issue, and most organizations are clearly not ready to deal with the myriad issues and details involved," said Ben Rothke, a senior security consultant at ThruPoint Inc., a management services company in New York.

Complying with data regulations will mean turning traditional notions of the IT security function and its role within organizations upside down, said Terri Curran, director of research at the Center for Digital Forensic Studies Ltd. in Auburn Hills, Mich.

"CSOs in the near future are going to have to get more creative about things like privacy, risk acceptance, forensics, industry-related regulations, and state and federal laws that are really going to affect them," Curran said. **C 42673**

IT Obligations Unclear Under California Privacy Law

Four months after new California privacy rules went into effect, more questions than answers have surfaced about what the law requires of IT organizations, according to legal and security experts. And answers are unlikely until at least a few cases are prosecuted and there's legal precedent that can be followed, they added.

Senate Bill 1386, which went into effect July 1, requires companies to inform California customers of security breaches involving the compromise of their names in combination with their Social Security, driver's license or credit card numbers.

But the ambiguous wording of the law leaves it open to a wide

range of interpretations, said Erik Laykin, president of Online Security Inc. in Los Angeles.

The law is unclear on several points, agreed Charles Brownlee, an attorney at Fulbright & Jaworski LLC in Austin. For instance, it's not specific about when disclosure is required from an IT perspective. Brownlee said. Under SB 1386, disclosure is mandated when "it is reasonably believed" that personal information has been acquired by an unauthorized person, she said.

But "even if a network is hacked, it's not always apparent what data was compromised," said Brownlee. The legislation also calls for "prompt" communication

of such breaches without specifying how soon customers need to be contacted, she said.

Similarly, while the law exempts companies that have encrypted their data, it doesn't specify what level of encryption is good enough, or whether both stored data and data in transit have to be encrypted, users said.

"There's a lot of concern all over the board, because there haven't been any cases that define the expectations for this law," said Erin Kennedy, a forensic analyst at the University of California's San Diego Supercomputer Center. Fear, uncertainty and doubt often rule the day in situations where

there's not a lot of guidance."

Both the university and the supercomputer center have taken steps to minimize exposure under the law. In some cases, data is being encrypted; in others, personally identifiable data is being replaced with unique identifiers.

"What people have to do is to interpret the law to what seems reasonable for your environment," said Todd Fitzgerald, a systems security officer at United Government Services.

"You've got to see what the intent of the requirement is and try to satisfy that to the fullest possible," he said. "There has to be some judgment that you are putting into that."

—Jakubian Vilkin

OK, our marketing is not as great as our technology.

Business Intelligence Vendor Rating

| | Technology Rating | Marketing Rating |
|------------------|-------------------|------------------|
| MicroStrategy | ★ ★ ★ ★ ★ | ★ ★ ★ |
| Cognos | ★ ★ ★ | ★ ★ ★ ★ |
| Business Objects | ★ ★ ★ | ★ ★ ★ ★ ★ |

Source: Leading Industry Analyst (2003)

**Fortunately, our 2,000 enterprise-class customers buy
our technology, not our marketing.**

See what a real business intelligence platform can do for you.

Order a FREE copy of "Applications of Industrial-Strength Business Intelligence" today.

Visit www.microstrategy.com or call 1-866-866-MSTR.

MicroStrategy
Best in Business Intelligence

Reporting : Analysis : Information Delivery

Corporate Cybersecurity Bill Tabled After Vendor Pressure

Sponsor challenges industry groups to find an alternative

BY DAN VERTON
WASHINGTON

REP ADAM PUTNAM last week shied away from introducing legislation that would have required companies to conduct independent security audits and detail the results in their annual reports. The retreat was a result of pressure from industry groups representing large hardware and software vendors.

Rather than introducing the Corporate Information Security Accountability Act of 2003, Putnam (R-Fla.) tabled the bill and challenged industry organizations to come up with an alternative proposal within 90 days. A working group of representatives from the Information Technology Association of America, the Business Software Alliance, the Business Roundtable (BRT), the SANS Institute and the U.S. Chamber of Commerce held its first meeting last week.

The vendor community has come out against the Putnam bill for two reasons, said John Pescatore, an analyst at Gartner Inc. Security vendors are worried that corporate budgets will shift toward consulting and audits and not security products, he said. And the IT product vendors are worried that companies will be less willing to upgrade once their current architecture has passed testing.

Putnam's office, the Chamber of Commerce and the BSA didn't respond to Computerworld's requests for comment.

However, several working group members and security analysts said the roadblock stems from both political and practical issues. Aside from the perceived existence of an antilegislation "cabal" consist-

A BILL

To amend the Securities Exchange Act of 1934 to require each publicly traded company to conduct an assessment of the company's computer information security.

1. *Be it enacted by the Senate and House of Representatives*
2. *in Congress assembled,*
3. **SECTION 1. SHORT TITLE.**
4. *This Act may be cited as the "Corporate Information Security Accountability Act of 2003."*

The opening passages of Putnam's bill require companies to conduct independent security audits and publish the results in their annual reports.

ing of large IT industry consortia, some security analysts questioned the wisdom of reporting security information to the Securities and Exchange Commission, because that has proven ineffective and at times costly [QuickLink 42387].

Alan Pallier, director of research at the SANS Institute, a member of the industry work-

ing group and a supporter of the Putnam measure, said the bill faces an uphill battle. The main adjustment being championed by Pallier includes the mandated use of commercially available automated tools for testing security configurations and vulnerability mitigation.

"By encouraging their use, you create a groundswell of

demand for benchmarks," Pallier told members of Putnam's staff in a memo. "Commercial organizations will step into that benchmarking space, and as organizations find themselves in the lower percentiles, they will improve their security, creating a powerful continuing force for overall improvement of security throughout the nation."

But not all members of the industry working group see the bill in the same light. Harris Miller, president of the Arlington, Va.-based ITAA, one of the main forces behind getting Putnam to table the bill, said the ITAA believes having the trial bar run the IT industry is a bad idea... and having government bureaucrats approving IT innovations before they are released to the marketplace is a terrible idea.

A spokesman for the BRT, a Washington-based association

of CEOs of large companies, including some of the software vendors that belong to the ITAA and BSA, said the BRT doesn't comment specifically on legislation that has not been introduced.

However, Klaus Kleinfeld, chairman and CEO of Siemens and chairman of the BRT's Security Task Force's Information Security Committee, told Computerworld in a written statement that while the BRT supports Putnam's effort to raise cybersecurity to the level of a national policy debate, BRT members aren't waiting for legislation to take action. The BRT is currently holding discussions with "manufacturers, purchasers and users of information security technology to shape the marketplace for IT security goods and services," said Kleinfeld, adding that proactive industry measures will be announced in the coming months. **Q 42666**

MORE ONLINE

For additional resources, see our Storage Knowledge Center online

QuickLink 45700
www.computerworld.com

Veritas Tools Target Storage Automation, Compliance

BY LUCAS MEARIN

Veritas Software Corp. last week announced a series of new and upgraded storage management tools with functionality that's aimed at utility computing, automated data management and regulatory compliance needs.

The rollout included an upgrade of the Mountain View, Calif.-based company's flagship NetBackup software, a new Data Lifecycle Manager tool and a product for tracking service-level agreements and the use of storage resources.

Glen Groshans, director of product marketing at Veritas, said NetBackup 5.0 lets storage administrators restore data after system crashes by using incremental backups of business applications on top of previous full backups. Until

now, users had to do complete backups that typically would take hours and offer less-current data for restoration.

The backup software will also work with Data Lifecycle Manager, which can be used to create virtual storage archives that include disk and tape devices and to index records for search and retrieval procedures. "It lets you maintain an audit trail on all media types," Groshans said.

Norm Fjeldheim, CIO at Qualcomm Inc. in San Diego, oversees a 76TB storage-area network that's primarily based on disk arrays from Hitachi Data Systems Corp. Qualcomm currently uses NetBackup 4.5, but Fjeldheim said he hopes the new release will help the company make better use of its disk capacity by au-

tomating the migration of old data to low-cost storage devices. "By doing that, we won't have to spend more money on additional disk space," he said.

Matthew Clark, a senior staff engineer at Qualcomm, said the wireless technology vendor retains data far longer than regulatory agencies require. The combination of NetBackup and Data Lifecycle Manager "is going to be a way for us to meet those storage requirements without having to use a one-size-fits-all policy," he said. Clark added that

NEW STORAGE TOOLS

DATA LIFECYCLE MANAGER: Automates the placement of data on different storage devices and provides indexing and search capabilities.

COMMANDCENTRAL SERVICE:

Lets IT managers set storage service levels and reports on resource usage for chargeback purposes.

he will also be able to use the incremental backup feature to safeguard Qualcomm's data more often.

NetBackup 5.0 is due next month and starts at \$5,000, and Data Lifecycle Manager 5.0 is scheduled to be released next quarter for an undisclosed price. The service-level tool, called CommandCentral Service 3.5, is available now and starts at \$22,000.

Data Lifecycle Manager falls short of a true information life-cycle management product that automatically controls data from creation to deletion, said Steve Kenniston, an analyst at The Enterprise Storage Group Inc. in Milford, Mass.

But Kenniston added that Veritas is addressing some key issues facing storage managers, including service-level agreements and user chargebacks. "With this integrated [suite], you can do true service-level agreements for backups," he said. **Q 42654**

Continued from page 1

Novell

Technology Inc. in Henderson, Nev., said he too has long been unhappy about Novell's dwindling market share, out of fear that the company could someday no longer be viable. The SUSE deal has lessened those concerns, he said.

"I see the acquisition of SUSE and the Linux growth as a great potential for us because it gives us somewhere to move to maintain our current network environment and to go with the open-source explosion that's happening," Jakus said.

Linux Push

Novell began his push to Linux last April when it announced plans to adopt Linux as a migration path for its NetWare network operating system (QuickLink 37774). "Definitely, when the next version of NetWare comes out, we'll be using it," Jakus said. "That's to me brings it all together."

Gavin McGaugh, head of IT at Manchester, England-based British Airways CityExpress,

Continued from page 1

Stone

When you read *Red Hat* was a bit pricey, does that mean there were negotiations with *Red Hat* that got to the point of naming a price? No. We decided that SUSE was who we wanted to acquire. We made a decision early on that SUSE was where we wanted to go. There was always an effort on the part of Novell to have a relationship in some form with *Red Hat*. We tried to form a support agreement with *Red Hat*, but that didn't work. It worked beautifully with SUSE.

It'd really like to clarify to what extent you had acquisition dis-

said the SUSE deal will likely mean a tightening of the airline's IT relationship with Novell. Currently, the regional air carrier is a heavy user of Novell products and of Linux from *Red Hat*. But that will likely change once Novell acquires SUSE, he said, because

customers with *Red Hat* as well. I'm not going to go there.

What does this mean for running NetWare on *Red Hat* Enterprise Linux? We still did that. We still certify the NetWare services on *Red Hat* 3.0 as well as on SUSE. Obviously, now that we own the [SUSE Linux] distribution, we have to potentially re-think that, but as of right now, our customers have been asking for both. There's no technical reason that we shouldn't provide at least an option if you want to run it on *Red Hat*. But we're obviously going to lead with SUSE.

So your advice to users running NetWare on *Red Hat* is to move to SUSE? Sure. You can have one-stop shopping from

of the expected synergy and because of recent higher prices and per-server licensing requirements from *Red Hat*, N.C.-based *Red Hat*. "We have no physical attachment to *Red Hat*," McGaugh said. "The barriers to entry for SUSE are very low. We'd probably push in that direction now."

Seeking Support

Rod Carney, manager of enterprise server services at Columbus, Ohio-based Huntington National Bank, said the inclusion of SUSE under the Novell banner brings a key benefit to its existing relationship with Novell after-sales support.

"We now really have a solution for a Linux implementation that will provide us with a support network," Carney said.

The bank is a big Novell user and has several *Red Hat* systems that are being used for a message-queuing gateway and other edge-of-network tasks. But now other Linux applications can be considered more seriously, he said.

"With Novell being such an incumbent here, now that they've acquired SUSE, that helps our decision if someone says, 'What do you prefer, *Red Hat* or SUSE? Two

Novell. You can buy the entire stack, support - you name it, you got it.

Don't you see this as a risky move, in light of the legal actions SCD has taken with respect to Linux? No, not at all. We think the SCD move is pretty much an unsubstantiated claim. They've never been able to prove anything they've been talking about. Our customers haven't believed at this issue. I don't believe SUSE has any particular issues with SCD. As far as we're concerned, it hasn't been an issue.

STONE ON A ROLL

To read the full interview with Novell's Chris Stone, head of our Web site:

QuickLink 42963
www.computerworld.com

We have no physical attachment to *Red Hat*. The barriers to entry for SUSE are very low. We'd probably push in that direction now.

GAVIN MCGAUGH, HEAD OF IT
BRITISH AIRWAYS CITYEXPRESS

days ago, I would have said 'I don't know.'"

A SUSE Linux user and former Novell user, Joe Poole, manager of technical support at Reading, Pa.-based Boscon's Department Stores LLC, said Novell will have to do more than just bring in SUSE and Xianlin to make its products compelling to corporate users, especially as a "killer desktop" operating system.

"Novell has to add value to the whole proposition," he said, including making it as simple for IT workers to install SUSE Linux as it is to install Windows. "Novell has to step up with all of its expertise, not just marketing," he said. "That's the problem we see now." **Q42677**

Microsoft to Stay Course On Linux Strategy

Microsoft Corp.'s chief Linux strategist said last week that the company won't change its strategy "one ounce" in the wake of Novell's acquisition of SUSE Linux.

Martin Taylor, general manager of platform strategy at Microsoft, said Novell's acquisition simply provides "further evidence that Linux is going to continue to consolidate and become more and more commercial."

"From our perspective, it means that Linux will move toward being held up to the commercial standards," Taylor said. "And that gives us an opportunity to look at things like cost, reliability, interoperability and even security for that matter on a more balanced playing field."

John Enck, an analyst at Gartner Inc., said Novell's acquisition of SUSE elevates the Linux threat on the server operating system for Microsoft, although not by "orders of magnitude."

Enck said Microsoft will have to decide how much more emphasis it wants to put on the low-level infrastructure and of the market where Linux plays, such as Web serving, file and print services, and management services, now that it has been making a push up the stack to focus on enterprise features.

But one area Microsoft will have to concern itself with is the 1,600 worldwide partners Novell has as Linux advocates, according to Enck. He said Microsoft will have to step up the training for sales consultants in the field to thwart the threat.

"The big thing is Novell is credible," Enck said. "It's someone with proven enterprise and field services [experience] that you can't wave your hands and dismiss."

— Carol Sliemers

Red Hat: Competition Unchanged

For *Red Hat*, the dominant enterprise Linux vendor in the U.S., last week's buyout of *Red Hat* SUSE Linux by Novell was no surprise, said John Young, president of marketing at the Raleigh, N.C.-based company.

Young said he's "not uncomfortable" with the development, and claimed that it doesn't significantly alter the competitive landscape. "We are the leaders in the market. The assets that Novell is poised to acquire are old stuff for us," he said. "[We're already] building on top of where they [are now going]," he said. "I don't doubt that that was a good move for SUSE. I don't think that takes us off our mission... and the success we're having in this market."

Young also claimed that it will be no easy task for Novell to overcome the cultural obstacle inherent in adopting an open-

source mind-set. "Novell is traditionally a proprietary technology company," he said, "so they're kind of putting their foot into the water on both sides here." He noted that whether Novell can make that work is still to be proved.

"I'm not sure how they'll manage that hybrid company," Young said. "I can't see any examples out there of how hybrid companies have achieved success. That's part of their challenges, in addition to the normal integration challenges" of bringing together Novell, SUSE and Xianlin, he added.

For *Red Hat*, the future is more clear, according to Young. "We're absolutely committed to be 100% open source, pure open-source," he said. "And that unwavering commitment will be a source of value to customers."

— Todd R. Weiss

Continued from page 1

Novell

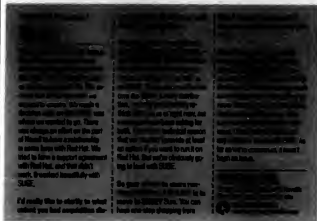
Technology Inc. in Henderson, Nev., said he too has long been unhappy about Novell's dwindling market share, out of fear that the company could someday no longer be viable. The SUSE deal has lessened those concerns, he said.

"I see the acquisition of SUSE and the Linux growth as a great potential for us because it gives us somewhere to move to maintain our current network environment and to go with the open-source explosion that's happening," Jakus said.

Linux Push

Novell began its push to Linux last April when it announced plans to adopt Linux as a migration path for its NetWare network operating system [QuickLink 3777]. "Definitely, when the next version of NetWare comes out, we'll be using it," Jakus said. "This is to me brings it all together."

Gavin McGaugh, head of IT at Manchester, England-based British Airways CityExpress,



said the SUSE deal will likely mean a tightening of the airline's IT relationship with Novell. Currently, the regional air carrier is a heavy user of Novell products and of Linux from Red Hat Inc. But that will likely change once Novell acquires SUSE, he said, because

of the expected synergy and because of recent higher prices and per-server licensing requirements from Raleigh, N.C.-based Red Hat. "We have no physical attachment to Red Hat," McGaugh said. "The barriers to entry for SUSE are very low. We'd probably push in that direction now."

Seeking Support

Rod Carney, manager of enterprise server services at Columbus, Ohio-based Huntington National Bank, said the inclusion of SUSE under the Novell banner brings a key benefit to its existing relationship with Novell: after-sales support.

"We now really have a solution for a Linux implementation that will provide us with a support network," Carney said.

The bank is a big Novell user and has several Red Hat systems that are being used for a message-queuing gateway and other edge-of-network tasks. But now other Linux applications can be considered more seriously, he said.

"With Novell being such an incumbent here, over that they've acquired SUSE, that helps our decision if someone says, 'What do you prefer, Red Hat or SUSE?' Two

We have no physical attachment to Red Hat. The barriers to entry for SUSE are very low. We'd probably push in that direction now.

.....
GAVIN MCGAUGH, HEAD OF IT,
BRITISH AIRWAYS CITYEXPRESS

days ago, I would have said 'I don't know.'"

A SUSE Linux user and former Novell user, Joe Poole, manager of technical support at Reading, Pa.-based Boscor's Department Stores LLC, said Novell will have to do more than just bring in SUSE and Xinian to make its products compelling to corporate users, especially as a "killer desktop" operating system.

"Novell has to add value to the whole proposition," he said, including making it as simple for IT workers to install SUSE Linux as it is to install Windows. "Novell has to step up with all of its expertise, not just marketing," he said. "That's the problem we see now." **Q42677**

Microsoft to Stay Course On Linux Strategy

Microsoft Corp.'s chief Linux strategist said last week that the company won't change its strategy "one ounce" in the wake of Novell's acquisition of SUSE Linux.

Martin Taylor, general manager of platform strategy at Microsoft, said Novell's acquisition simply provides "further evidence that Linux is going to continue to consolidate and become more and more commercial."

"From our perspective, it means that Linux will move toward being held up to the commercial standards," Taylor said. "And that gives us an opportunity to look at things like cost, reliability, interoperability and even security for that matter on a more balanced playing field." John Erick, an analyst at Gartner Inc., said Novell's acquisition of SUSE elevates the Linux threat on the server operating system for Microsoft, although not by "orders of magnitude."

Erick said Microsoft will have to decide how much more emphasis it wants to put on the low-level infrastructure and of the market where Linux plays, such as Web serving, file and print services, and management services, now that it has been making a push up the stack to focus on enterprise features.

But one area Microsoft will have to concern itself with is the 1,600 worldwide partners Novell has as Linux advocates, according to Erick. He said Microsoft will have to step up the training for sales consultants in the field to thwart the threat.

"The big thing is Novell is credible," Erick said. "It's someone with proven enterprise and field services [experience] that you can't wave your hands and dismiss."

—Carol Silvers

Red Hat: Competition Unchanged

For Red Hat, the dominant enterprise Linux vendor in the U.S., last week's buyout of rival SUSE Linux by Novell was no surprise, said John Young, vice president of marketing at the Raleigh, N.C.-based company.

Young said he's "not uncomfortable" with the development, and claimed that it doesn't significantly alter the competitive landscape. "We are the leaders in the market. The assets that Novell is poised to acquire are old stuff for us. We're [already] building on top of where they [are now going]," he said. "I don't doubt that that was a good move for SUSE. I don't think that takes us off our mission... and the success we're having in the market."

Young also claimed that it will be no easy task for Novell to overcome the cultural obstacles inherent in adopting an open-

source mind-set. "Novell is traditionally a proprietary technology company," he said. "So they're kind of putting their foot into the water on both sides here." He noted that whether Novell can make that work is still to be proved.

"I'm not sure how they'll manage that hybrid company," Young said. "I can't see any examples out there of how hybrid companies have achieved success. That's part of their challenges, in addition to the normal integration challenges" of bringing together Novell, SUSE and Xinian, he added.

For Red Hat, the future is more clear, according to Young. "We're absolutely committed to be 100% open-source, pure open-source," he said. "And that unwavering commitment will be a source of value to customers."

—Todd R. Wieser

THE VERITAS
SOFTWARE COMPANY



NetBackup. The fastest tape backup software. Simple, flexible, fast and reliable. It's the only backup software that can back up everything you need to protect.

VERITAS

© 2000 VERITAS Software Corporation. All rights reserved. VERITAS and the VERITAS Logo Reg. U.S. Pat. & Tm. Off.
All other trademarks are the property of their respective owners.



**Thinner
Designs:**

Power efficiency
allows for smaller
cooling systems
and lighter
notebooks.

**Integrated
Wireless:**

Built-in 802.11b
wireless LAN
capability eliminates
the need for
adapter cards.

**High
Performance:**

Extremely
responsive to the
most demanding
business
applications.

**Longer
Battery Life:**

Power-conserving
technology
enables extended
battery life.

The Unwired Office starts here.

The promise of a truly wireless workforce is being fulfilled. Because Intel® Centrino® mobile technology delivers unprecedented levels of mobility for your users and easier deployment for you. Intel is working with other industry leaders to make wireless networking not only reliable, but secure. And Intel continues to work closely with Cisco to extend Intel Centrino mobile technology's ability to support enhanced wireless security protocols.* Now you can do something the whole office will thank you for. Unwire. For all the details, go to intel.com/unwire.



intel.

©2003 Intel Corporation. Intel, Intel Inside and the Intel Centrino logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Other names and brands may be claimed as the property of others. All rights reserved. System performance, battery life, services, performance and functionality will vary depending on your specific hardware and software configurations. See http://intel.com/products/performance_info for more information. *Some security solutions may not be supported by your PC manufacturer. Check with your PC manufacturer for details on compatibility.

Cohen Sees Rebound for Analysis Tools

BY MARC L. BONGIORNI
Gerry Cohen, CEO of Information Builders Inc. in New York for the past 27 years, spoke with Com-

puterworld last week about business intelligence software, offshore outsourcing and what's happening at his company.

Is business intelligence a healthy market? I think it will be a healthy segment for 2004. The big companies are picking an

enterprise solution, and mid-size and smaller ones are getting into it. The last couple of months, there's been a little relaxation in budgets.

What's coming from Information

Builders? In a few weeks, visual online analytical processing [OLAP]. This will let you look at multiple dimensions at one time vs. what we have today, where you see one dimension and drill down and go across to another dimension. We'll have it all on one panel in one shot.

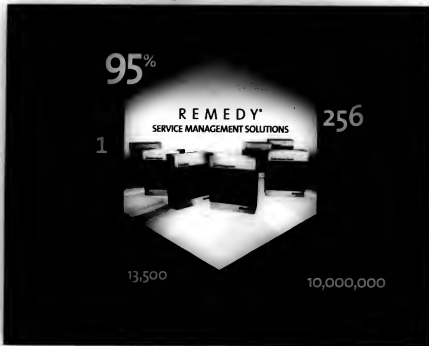
For instance, when you look at quality [control], you can see that quality in a California plant is down. That's an effect. When you have an effect, you have to see what's the cause. That's where OLAP comes in — it lets you look at raw material supply. That's OK. So you look at attendance and look at people as you're looking for the solution. The entire display changes. You don't have to drill down to the plant, to people, to raw materials.

How is outsourcing affecting the industry? I'm chairman of the New York Software Industry Association. We've taken a look at what outsourcing has done to jobs in New York City. In some sectors, it's devastating. On the other hand, you have companies saying, "My costs are lower, [and] because of this, I'm more competitive."

If you think [IT] is a strategic function that companies use to compete against one another, then you can't move it out of the U.S. You can't move it too far away. If you believe that it doesn't matter, then move it where you want. My position is that it does matter.

Will business intelligence go offshore? You can't do that. BI is what we call "information now." I want to know something right away. What runs companies are people, processes and technology. The technology probably stays here. The people may or may not go offshore. ☐ 42621

Strength in Numbers.



Remedy is the leader in Service Management solutions. Our numbers speak for themselves.

Yet, there are other numbers important to Remedy. Operating cost reductions, improvements in customer satisfaction, increased employee productivity, shorter time to value—the bottom-line numbers you will achieve by using Remedy's out-of-the-box best practice applications to automate service management processes.

Your success depends on those numbers. Remedy delivers them.

www.remedys.com/strength
or call us at 1.888.294.5757

Remedy
a BMC Software company

COHEN CONTINUED

To read the full interview with Information Builders' CEO, go to our Web site:

QuickLink 42682
www.computerworld.com

Autonomic Technology Faces Big Challenges, Panel Says

Users are enticed by self-management tools but cite cost and scalability issues

BY PATRICK THIBODEAU
WASHINGTON

Autonomic computing — the development of systems that can manage and repair themselves — holds great appeal to NASA for its deep space missions. But the technology faces substantial hurdles, a top IT official at the space agency said during a panel discussion here recently.

"We've encountered huge challenges in validating and testing some of these technologies, and it ended up taking a lot more time and being a lot more costly than we ever imagined," said Peter Hughes,

assistant chief for technology at the IT division of NASA's Goddard Space Flight Center in Greenbelt, Md.

Although he labeled autonomic computing a "break-through technology," Hughes said the challenges include achieving the scalability needed to handle cascading problems that affect multiple systems. It will also be difficult to develop tools that can sift through and make sense of diagnostics data gathered from various systems, he added.

IBM and other systems management vendors are delivering pieces of autonomic

technology in the form of server self-management and self-optimization tools.

Alan Ganek, a vice president at IBM who is leading its autonomic efforts, said the increasing complexity of IT infrastructures is making the job of running corporate data centers more and more difficult.

"Nobody can understand all the pieces and parts as they come together," Ganek said. He and Hughes were panelists at a forum on autonomic computing sponsored by the Woodrow Wilson International Center for Scholars.

Much to Be Learned

Despite the potential of self-management to free IT managers from having to focus on

Autonomic Computing

■ Promises to reduce the complexity and cost of running data centers.

■ Needs years of development before it can support enterprise-wide systems.

mundane systems issues, the panelists said much still needs to be learned, such as the real cost of autonomic approaches.

For instance, many government agencies are moving from homegrown systems to off-the-shelf applications in an effort to standardize operations and reduce their IT

costs. But Hughes noted that NASA has had difficulty synchronizing an upgrade of its commercial systems.

"Often, we displace some simple solution with more complex ones and are not looking at how much it will cost to maintain that system and keep it operating," he said.

Software bugs are another issue. Gail Kaiser, director of the programming systems laboratory at Columbia University in New York, said the idea of perpetually testing systems even after deployment is related to autonomic computing.

"Software engineers have long recognized that you're never going to get out that last bug in the lab," she said. "But you shouldn't stop testing it then, and you should figure out continuing to patch, repair it and reconfigure it." □ 42963



IF WE CAN'T AFFORD THE SOLUTION, THEN IT'S NOT A SOLUTION.

If you are a growing enterprise, your need for new software always exceeds your budget. Or does it? SAP has a range of solutions to fit any size business and any budget. Solutions that can be up and running quickly — even in a matter of weeks. And since they're modular and based on an open platform, they can grow and expand as you do. SAP has over 30 years of experience helping businesses of all sizes solve business issues. Affordably.

THE BEST-RUN BUSINESSES RUN SAP



FOR AN OPPORTUNITY TO WIN AN ALL-EXPENSE-PAID TRIP TO A BUSINESS MANAGEMENT SEMINAR, LOG ON TO SAP.COM/USA/AFFORDABLE OR CALL 888 592 1727

© 2003 SAP AG. SAP and the SAP logo are trademarks and registered trademarks of SAP AG in Germany and several other countries. Product names subject to specific product usage and other factors. Compare this advertisement for further details. Content appears solely subject to copyright law, software, and other restrictions and is subject to change without notice.

THE SWITCH IS ON
54,000 HAVE ALREADY SIGNED UP



VISIT WWW.1AND1.COM TODAY

THE WORLD'S #1 WEB HOST TO HELP YOU DO IT BETTER

With 1&1's Customer Satisfaction Guarantee, you can be confident that you'll be able to switch to any 1&1 hosting plan at any time, with no commitment necessary. And, with 1&1's 24-hour technical support, you'll always have the help you need to get your website up and online. So, with 1&1, you can be confident that you'll be able to do it better.

GET YOUR 1&1 WEB HOST PLAN... NORMALLY \$29/MONTH 3 YEARS FREE

...WITH OUR NEW LIVE LAUNCH PROMOTION!
...WITH NO COMMITMENT NECESSARY

500 MB, 5x FTP, backups, firewalls
5000 MB/mth traffic, \$0.99/Gb only for additional
scanning, Webmail
Live site statistics, log files, turnkey
CGI-library, own CGI, FrontPage 2002 extensions, multiple password protection, MySQL, SSL encryption, Cron Jobs, SSH, Developer tools
Express support

Form editor, Newsletter Management tools,
one-on-one online dialogues, turnkey web database applications, Chats,
Forums
Template-ready online WebsiteCreator, full
version NetObjects Fusion 7.0, Search-Engine Registration and many
more worth \$300, absolutely free
Register or transfer unlimited.com and other leading domains for just \$5.99 each per year,
50 sub-domains, point up to 100 domains registered elsewhere to this plan



No credit card needed.
No contractual obligations. No
strings attached.



Upload your current
site. Or, build a new one with
template-ready WebsiteCreator.



Upgrade your site
with ready-to-run forms, chat,
database applications and more.



Sign up today
and we'll give you a \$25 voucher
for Google AdWords*.

By creating this unique opportunity to test 1&1 risk-free, we are investing in you rather than additional advertising. You see, we believe you'll be so pleased with our services you'll stay with us and even recommend us to your friends. Then after the 3 years, you can effortlessly switch to any 1&1 hosting plan ranging from \$5 to \$29. One plan per customer only. Promotion expires 01/14/04.

1&1

WEB FREELY

1&1
SERVED
FREELY

MARYFRAN JOHNSON

Vendor Vision Quests

THERE'S SOMETHING ironic about the way so many vendors are talking about simplifying computing environments yet struggling to explain their visions in terms that make sense to anybody. Carly Fiorina was Exhibit A of this conundrum recently, as the Hewlett-Packard CEO tried in vain to explain her "adaptive enterprise" strategy by saying it was built on "Darwinian reference architectures."

Say what? Is that just a complicated way of saying "evolutionary"?

Listening to IBM big-wigs explain on-demand computing, or Sun Microsystems honchos talk about NI automation technologies, or Oracle's Larry Ellison discuss grid computing could induce a similar brain cramp.

When you strip away the carefully branded marketing buzzwords, what the IT market leaders are talking about (and hoping to sell) are increasingly sophisticated software, hardware and services to accomplish one or more of these tasks:

- Automating and integrating technical and business processes.
- "Virtualizing" or provisioning computing resources on increasingly self-managing networks.
- Redeploying underused resources to match user demands or business needs.
- Consolidating platforms into simpler, and cheaper, architectures (often Linux running on Intel bones).
- Putting "pay-by-the-drink" consumption into play for software, hardware and even services.

I've become a little obsessed lately with finding what one of my editors sardonically calls a Grand Unified Buzzword (GUB) for all of the above. Being a big believer in language that makes sense of things, I've been searching for a vendor-jargon-free, catch-all phrase that



would make sense of all the pitches, from automatic and on-demand to adaptive and utility computing. I thought a revival of that old standby next-generation computing could tie a neat, conceptual ribbon around everything.

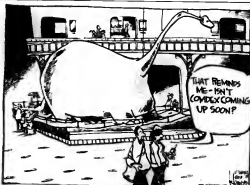
So last week I tried my new GUB on a roomful of veterans of vendor strategies: the San Diego chapter of the Association of IT Professionals. These IT experts listened politely but gave my unified buzzword a definitive thumbs down. To experienced IT managers, next-generation has come to mean generic hype about cool technology nobody can make practical use of yet.

Well then, I challenged, what would they call it? That launched an entertaining contest to pick the best word to describe where computing is headed. The favorites were transparent, pervasive, accessible, intuitive and effortless. All of them, you'll notice, speak to a simpler user experience. There wasn't a "Darwinian reference architecture" in sight.

AITP member Ray Causey, a partner at Tatum CIO Partners and former CIO at Mailboxes Etc., said he believes the business value of more simplified applications — the fewer features, the better — would actually allow vendors to charge more for what they do now for the complex, user-unfriendly stuff. "You'd end up with users who are more productive and getting the job done, leaving CIOs to concentrate on adding business value in other areas," Causey said.

"Easy-to-use software would actually enhance the CIO's image as a business-focused executive."

Summing up the situation nicely was AITP member Reid Wurick, president of Teracenter Inc. "All of the cool stuff we need today already exists. What we need to do is to put it together and make use of it. Now the question is, Can the major players come together to take computing to the next level?" ☐ 42627



PIMM FOX

Straight Talk With Vendor Hits Pay Dirt

THE OIL INDUSTRY'S blunt language seems out of place when applied to IT, where sales and marketing lingo are often misused with analyst prognostications in order to obscure reality. Perhaps it's the straightforward nature of oil and gas exploration that invites direct talk: You either hit pay dirt or you don't.

So talking to Reid Nuttall, vice president of IT at Houston-based Varco International Inc., about supply chain management takes some adjustment. For example, his primary concern isn't cutting costs. It's customer lock-in.

"The first issue was to have something facing the customer that lets them do business quickly and easily," Nuttall says. "We're connecting system to system and want to lock in the customer. lock them into our spare parts."

Varco, which makes and sells \$1.3 billion worth of drilling rig equipment annually, believes that if it offers good prices and an easy way to do business, the customer will, as Nuttall says, stick around.

That same attitude describes the bake-off Varco held with three IT vendors to build a supply chain system that could flexibly connect with EDI, XML and even e-mail-based customer systems and then link to Varco's own back-end systems. Flexibility was crucial, since Nuttall hadn't seen two customers with the same ERP system.

Varco evaluated a commercial bus consisting of a hosted middleware product. It also considered using standard Microsoft tools and paying a consultant to set up the system. But in the end, the company settled on a system to be set up by its ERP vendor, Glavia International Inc., because integration with the existing architecture seemed easier. Varco also had more clout with Glavia, and it was able to persuade the El Segundo, Calif.-based ERP division of Fujitsu Ltd., to really dig into each



type of customer connection. Glavia managed to put together a system that combines e-commerce middleware for all the transport, error-checking and handshaking between the customers and Varco.

Varco's system, used in operations in the U.S., Britain, Canada and Singapore, can automatically send requests for quotes, shipment dates, purchase orders, invoices and any other changes that might occur.

For Nuttall and his IT staff of 80, the most difficult challenges involved knowing where the messages moved in the supply chain system and how to make the system automatically check the health of operations. "For folks on the front end, you're the one controlling the information, so you've got to be ready to fix any bad information at the source," says Nuttall.

In addition, Varco had to draw all the relevant connections to the different XML versions used by customers.

Now, with just one IT specialist and a business analyst, Varco's package is up and running — and, coincidentally, saving the company money. **Q 4254E**

needs of today's IT industry. Here's why:

For more than 40 years, the IT business has been dominated by its largest hardware, software and networking suppliers. Throughout the 1990s, the CEOs of product companies such as Intel, Microsoft, Oracle, Cisco, Sun Microsystems and Dell were by far the most visible industry leaders. The voices of IT customers and IT services companies — IBM, EDS, Accenture and others — were much more muted.

But have you noticed that ever since the bursting of the dot-com bubble, the words of Bill Gates, Larry Ellison, John Chambers and company don't have nearly the impact they once did? Part of this is simply a matter of these IT boosters having to spend a decent interval licking their wounds and eating humble pie. But there's a more fundamental reason: Increasingly, IT product companies are finding themselves unable to speak to the technology in-



dustry issues that really matter.

By now, it should be clear that the health of the IT industry can't be restored simply by delivering more powerful servers, operating systems, databases or even gridlike networks. Renewed growth will require that customers move forward with major new classes of IT usage. Many of these new applications will be industry-specific in nature and

won't be dependent upon new generations of general-purpose products. Instead, they'll require the strong commitment of customers and the IT services companies that support them. This is why I have long argued that IT industry leadership needs to shift away from product companies and toward IT services firms. But thus far, the major services companies have been slow to assume the role of IT industry advocates, resulting in today's noticeable leadership void.

DAVID MOSCHELLA

Tiger May Be Right for Accenture

AS A GENERAL RULE, world-class companies shouldn't tie their images too closely to the appeal of any one celebrity. This year has already shown why deals with sports stars are especially risky: Baseball's Sammy Sosa and basketball's Kobe Bryant were among the most admired athletes in American sports. Then Sosa was caught using an illegal corked bat, and, far more seriously, Bryant was accused of sexual assault. IBM probably had it right when it chose the timeless image of Charlie Chaplin's tramp to introduce its first PCs.

Nevertheless, the recent multiyear contract enabling Accenture to use Tiger Woods as the global symbol of its new High Performance Business initiative is intriguing, and perhaps even important. To me, the significance of this deal isn't what I says about the impressive rise of golf within the global business community, but rather how it accurately reflects the

Farwell to H-IBs, But Also to Jobs

THE ARTICLE "High-Tech's Use of H-IBs Drops" (QuickLink 41223) includes this statement: "The kind of push to hire the idea that we are throwing Americans out in the street and hiring H-IBs to replace them," said Tom Stohler, a vice president of the American Electronics Association, a trade group representing the high-tech industry that has advocated a high-or-H-IB cap. Stohler's comment is disingenuous, because the industry will continue to outsource computer work overseas.

Robert Bos
Plainville, N.Y.

A Friend in D.C.

I WOULD REMOVE members of the programming community to learn the name Tom Tancredo "OGA, Congressman Explains His Opposition to H-IB Visa." QuickLink 41778). He's our best friend in Washington. Where most members of Congress express earned sympathy when told of the problems programmers face, Tancredo has taken action. He has introduced

real legislation intended to help America's programmers. In standing up to the money interests, he has taken a lot of heat from politicians. Programmers ought to take note of what Tancredo has done for them and give him their support.
John Mikala
Founder, Programmers Guild, Newark, N.J.

Laughing With Nick

NICHOLAS PETRELEY has always written insightful columns, but "Sun Microsystems on the Couch" (QuickLink 41853) was great. Lastly, his Microsoft bashing and Linux-only articles have gotten boring; this article portrayed history very humorously. I was laughing and learning at the same time.
Prakash Tambe
Empact Corp.,
Rolling Meadows, Ill.

Extra Extranets

JEAN COMBOLLO raises the issue in her Oct. 6 article "Law Firms Open Up" (QuickLink 41214), of the need to have a "standard way to view numerous extranets at once." It might be mentioned that

there are firms that are currently accomplishing this task quite adroitly, allowing clients to toggle among multiple matters after only one extranet log-in.
Margaret Morton
Atlanta

Outsourcing and the Founding Fathers

THE TREND toward the outsourcing of jobs and manufacturing overseas is in basic conflict with concepts of national sovereignty. In a white paper commissioned by President George Washington and the U.S. Congress, the first secretary of the treasury, Alexander Hamilton, articulated a policy of industrial and military self-sufficiency. Hamilton's "Report on Manufactures" says:

"Not only the wealth, but the independence and security of a country, appear to be materially connected with the prosperity of manufactures. Every nation, with a view to these great objects, ought to endeavour to possess within itself all the essentials of national supply. These comprise the means of subsistence, habitation, clothing, and defence."

The Accenture/Tiger Woods arrangement suggests that this might be changing. Let's hope that the company isn't just basking in Woods' limelight and that it's committed to becoming a much more visible and positive industry force.

A few people embody the combination of ability, focus and pursuit of excellence more completely than Tiger Woods. But beyond his many great individual achievements, Tiger's most important accomplishment has been to raise the global image of and enthusiasm for his sport. If Accenture can actually start doing this for IT, its huge multimedia campaign will be well worth the cost and risk, and could become a real marketing coup.

For nearly three years, the IT business has been understandably timid and defensive. Perhaps the time for more aggressive efforts has finally returned. **Q 4254H**

WANT OUR OPINION?

More columns and links to archives of previous columns are on our Web site:
www.computerworld.com/columns

READERS' LETTERS

"The possession of these is necessary to the perfection of the body politic; to the safety as well as to the welfare of the society; the want of either is the want of an important organ of political life and motion, and in the various crises which await a state, it must severely feel the effects of any such deficiency."

Our present trade agreements contradict the dreams and intent of our founding fathers. Not every nation is so willing as we to relinquish its vitality for quick profits. Our habits and nature will eventually exact a substantial cost.
Byron B. Gentry
Five Seven Enterprises,
Pittsfield, N.H.
bushwh4ke@webeydians.net

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Letters, Computerworld, P.O. Box 3071, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

For more letters on these and other topics, go to www.computerworld.com/letters

INTRODUCING ENSEMBLE



THE FASTEST WAY TO MAKE YOUR APPLICATIONS PERFORM TOGETHER

Imagine your applications – both legacy and new – performing together as an ensemble.

That vision can become a reality surprisingly quickly with Ensemble, the comprehensive integration platform with all the functionality you need to rapidly complete any type of integration project on deadline and on budget. Even complex projects you may have struggled with in the past.

With its unique fusion of powerful technologies for application integration, development, deployment, and management, Ensemble enables extremely fast integration and rapid development of “composite applications” – new business solutions that integrate data, orchestrate business

processes, and enhance the value of legacy applications. You’ll see real-world evidence of this in the customer testimonial section of our web site.*

Ensemble is exciting new software from InterSystems. Over the past twenty-five years our high performance products have been deployed in more than 100,000 mission-critical systems around the world.

We’re so confident that Ensemble is dramatically faster than any other integration technology, we’ll be happy to begin our partnership with you by conducting a pilot project. To pursue this, contact us at:

www.InterSystems.com/Ensemble/Pilot



*Read how companies like yours have integrated applications faster with Ensemble: www.InterSystems.com/Ensemble/Customer
If you are a System Integrator in need of a rapid integration platform, come to www.InterSystems.com/Ensemble/Partner

TECHNOLOGY

11.10.03



EMERGING TECHNOLOGIES

Making Access a Figure of Speech

Voice authentication technology eases access for users, but standards are evolving slowly and user doubts about accuracy are hindering deployment. **Page 32**

SECURITY MANAGER'S JOURNAL

SSL Broadens VPN Access

A Secure Sockets Layer virtual private network broadens access at less cost than a hardware VPN, but it also poses new security challenges to Vince Tuesday. **Page 38**



OPINION

Don't Buy Security Snake Oil

Robert L. Mitchell warns against the blowhard vendors and experts who peddle questionable answers to your company's security problems. **Page 40**

Eyes

EVERY AFTERNOON at 4:30, a screen pops up on the PC of Neil Montgomery, CEO of Davis Controls Ltd. in Oakville, Ontario. It tells him of the important events of the day, such as how many orders the company brushed, how much was billed, the names of customers who have gone past 90 days without paying and the orders that have missed delivery promises.

His business activity monitoring (BAM) system also tells him about things that didn't happen. For example, Montgomery's BAM system sends him 15 daily e-mail alerts, one of which identifies any remote salespeople who haven't logged in that day to download the latest information from a corporate database about the customers in their territories.

"Sometimes those remote sales guys will

just sit out there in never-never land, and as long as they think no one is watching, they'll search to their own drummer," he says.

But Montgomery watches through the eyes of Macola Enterprise Suite, an ERP package from Exact Software, a subsidiary of Exact Holding NV in Odijk, Netherlands. Macola ES includes the Exact Event Manager, a BAM product that triggers alerts and reports on activity and nonactivity both inside and outside of the ERP system.

BAM, a term coined by Gartner Inc., refers to the automated monitoring of business-related activity affecting an enterprise. Although BAM applications are seldom truly real-time, they generally look at and report on activity in the current operational cycle — the current hour, day or week, for example — and are designed to spot problems early enough to head them off.

Continued on page 30

TECHNOLOGY

11.10.03



EMERGING TECHNOLOGIES Making Access a Figure of Speech

Voice authentication technology eases access for users, but standards are evolving slowly and user doubts about accuracy are hindering deployment. **Page 32**

SECURITY MANAGER'S JOURNAL SSL Broadens VPN Access

A Secure Sockets Layer virtual private network broadens access at less cost than a hardware VPN, but it also poses new security challenges to Vince Tuesday. **Page 38**



OPINION Don't Buy Security Snake Oil

Robert L. Mitchell warns against the blowhard vendors and experts who peddle questionable answers to your company's security problems. **Page 40**

Business activity monitoring tools are emerging that watch and report on events as they unfold. **BY GARY H. ANTHERS**

EYES Everywhere

Anyone who needs to know something now has no excuse not to know that thing

NEIL MONTGOMERY
V.P., B&B

EVERY AFTERNOON at 4:30, a screen pops up on the PC of Neil Montgomery, CEO of Davis Controls Ltd. in Oakville, Ontario. It tells him of the important events of the day, such as how many orders the company booked, how much was billed, the names of customers who have gone past 90 days without paying and the orders that have missed delivery promises.

His business activity monitoring (BAM) system also tells him about things that didn't happen. For example, Montgomery's BAM system sends him 15 daily e-mail alerts, one of which identifies any remote salespeople who haven't logged in that day to download the latest information from a corporate database about the customers in their territories.

"Sometimes those remote sales guys will

just sit out there in never-never land, and as long as they think on one is watching, they'll march to their own drummer," he says.

But Montgomery watches through the eyes of Macola Enterprise Suite, an ERP package from Exact Software, a subsidiary of Exact Holding NV in Delft, Netherlands. Macola ES includes the Exact Event Manager, a BAM product that triggers alerts and reports on activity and connectivity both inside and outside of the ERP system.

BAM, a term coined by Gartner Inc., refers to the automated monitoring of business-related activity affecting an enterprise. Although BAM applications are seldom truly real-time, they generally look at and report on activity in the current operational cycle — the current hour, day or week, for example — and are designed to spot problems early enough to head them off.

Continued on page 30



cowboy

lasso



Warranty Information: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC 27709. **Attn:** Dept. 4JUA/5223. IBM makes no representation or warranty regarding third-party products or services. *Prices do not include tax or shipping and are subject to change without notice. Retailer prices may vary. †Requires download of client software. ‡Mobile Intel Pentium processors feature Intel SpeedStep® technology. With Intel SpeedStep, processor speed may be reduced to conserve battery power. ‡Based on IEEE 802.11b. This wireless LAN product has been designed to permit legal operation worldwide in regions in which it is approved. Operation on channels 12-14 is not permitted in all regulatory regions of the world. Consequently, the wireless LAN feature is limited to operate on channels 1-11 and will not support channels 12, 13 and 14. This product has been tested and certified to be interoperable by the Wireless Ethernet Compatibility Alliance and is authorized to carry the Wi-Fi logo. ‡Some software may differ from its retail version (if available) and may not include user manuals or all program functionality. Software license agreements may apply. ‡GB = 1,000,000,000 bytes when referring to storage capacity. Accessible capacity is less, up to 3GB is used in service partition. ‡Includes battery and optional Intel hard disk instead of standard optical drive in UltraBay bay, if applicable; weight may vary due to vendor components, manufacturing process and options. ‡There may be certain points on the system. ‡Telephone support may be subject to additional charges. If a machine is listed as having "Onsite service for select repair" or "Limited" onsite service, this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, IBM will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board or base cover. To determine the complete list of parts for which onsite service is available for a particular machine, contact IBM. IBM will attempt to diagnose and resolve any problems remotely before sending replacement part or technician. ‡These services are available for machines normally used for business, professional or trade purposes, rather than personal, family or household purposes. Not all machine types and models are

Outfit users with IBM® ThinkPad® notebooks including Access Connections software and wireless Intel® Centrino™ mobile technology (select models), and you may experience something really wild: a quieter help desk. Because Access Connections helps users switch between wired and wireless settings at the drop of a hat. So whether you're working on upgrades, security enhancements or integration, you won't have to keep diverting resources to help users connect. Wireless IBM ThinkPad notebooks with Access Connections software. Welcome to the new wireless frontier.

think freedom

51.299*

1.769·

[illegible]

Continued from page 27

There is no precise definition of BAM products. They incorporate concepts from — and sometimes are built on — ERP, business intelligence (BI), business process management and enterprise application integration (EAI) software. Most vendors, of those types of products claim to have BAM offerings.

And BAM isn't a new concept: credit card companies have had real-time fraud monitors for years, and manufacturing facilities have real-time error-detection software built into their assembly lines.

Most companies monitor their business activity, but it's often after the fact — too late to head off a problem such as a missed bid deadline or the loss of a major customer. "The conventional wisdom has been to just take transactional data and move it to the data warehouse and then to the BI system," says Mike Smith, a senior vice president at Ventana Research in Belmont, Calif. "But those systems aren't responsive."

Indeed, BAM applications generally don't take data from a data warehouse; they pluck it in real time from the applications where it originates — order entry, accounts receivable, customer relationship management and so on. Output takes a variety of forms, including dashboards, e-mails, pager alerts and conventional reports.

"What's new with BAM," Smith says, "is we've taken the subcomponents of technologies that have matured in the last three to four years and put them together to provide more relevant information in a much more responsive fashion." These components include EAI, event management, rules, workflow monitoring and alerting technology, he says.

"BAM tools seem to work," says Gartner analyst Bill Gassman. On the other hand, he says, most BAM applications today aren't very sophisticated. They tend to be narrowly focused — one could be designed to watch for a malfunction on an assembly line, for example. "But what if there are external factors, like a FedEx shipment of parts is late? How do you integrate that?" Gassman asks. Recognizing such concerns, vendors are starting to build BAM into their supply chain products, he says.

Montgomery says BAM enables him to manage his

What's Next for BAM

BUSINESS ACTIVITY MONITORING today is based on first-generation tools, but in a few years, BAM systems will become tightly coupled to business process management systems, says Gartner analyst Bill Gassman. "BAM applications may send alerts in a push-by-subscribe model to lots of BPM systems throughout the enterprise. Events go in and alerts come out, but those alerts just become events in other applications."

For example, Gassman says, a BAM system could generate an alert that the estimated date of a package delivery had slipped. A CRM system and a BPM system might each subscribe to such "package due-date change" alerts, extending the usefulness of the alerts.

Over time, BAM systems will include even more sophisticated rules of logic. They eventually will be capable of finding hidden patterns in current business activity by do-

ing on-the-fly analyses of historical data, says Bill Jacobs, a senior product manager at Sybase Inc. in Dublin, Calif. "It is a process is beginning to go south, typically the early seeds of that are hard to see," he says. "Eventually, we'll see BI and BAM married at the level of using historically recorded data to identify problems much earlier."

But doing that will require much network bandwidth and computing power. "There are a couple of more cycles of Moore's Law required," Jacobs acknowledges.

Even further out lies the Holy Grail of BAM, Jacobs adds. That's when a system not only sees a problem coming but also goes beyond sending alerts to actually fixing the problem — automatically reordering a part when it sees that a shipment has been lost, for example. "That's a sort of autonomous response, a self-learning system," he says.

—Gary H. Anthony

company more proactively. "Before, I'd have to wait until a customer called with a complaint or I'd have to wait until the month-end financial statements to really get a feel for how the business was doing."

Montgomery generally gives his employees free rein to use Exact Event Manager and to define alerts, which can be triggered by events in the company's front-end systems, such as CRM, and back-office systems, such as purchasing, inventory, order entry and accounting. "Anyone who needs to know something now has no excuse not to know that thing," he says.

Heads Up

The Albuquerque city government uses NoticeCast from Cognis Corp. in Burlington, Mass., to proactively push e-mail notices of important events — in near real time — to city employees, residents and vendors. NoticeCast sits outside the city's firewall on an extranet and monitors events by periodically querying Oracle Corp. tables populated by municipal systems. It alerts city managers to events and notifies outside parties of government actions. For example, it does the following:

- Every morning, NoticeCast sends an e-mail to each vendor that was issued an electronic payment during the night, directing the vendor to a Web site on the extranet where it can get a remittance report.
 - Every evening, NoticeCast sends an e-mail to each Albuquerque resident for whom a water bill was produced. The e-mail contains all the pertinent billing information and directs the resident to a Web site where he may pay his bill online.
 - Once a day, the system sends e-mail to certain city employees, letting them know of all online payments made to the city during the past 24 hours.
 - Whenever a candidate files a contribution report, NoticeCast sends e-mail to city employees responsible for tracking campaign loan compliance.
- The e-mail alert system helps the city track events faster and more thoroughly than before, says Chris Framel, a systems analyst for the city. "And before NoticeCast, we didn't do [electronic] payments at all because it was so difficult."

Framel says the city may buy a license to use NoticeCast inside the firewall on its intranet, something he says is "quite expensive." It would be used to monitor financial and payroll systems. "For example, we could monitor overtime abusers and sick-leave abusers," he says.

Some BAM systems are pretty basic, simply letting a user know whether an event has occurred. Others apply user-supplied rules and Boolean logic and are more complex. At Davis Controls, for example, when a promised under-delivery date is missed, one e-mail alert is generated for the responsible salesperson, one goes to the customer with an apology, and one goes to an expediter. Different e-mails go to new customers, depending on the size of their initial orders.

Over the next few years, BAM systems will employ increasingly powerful logic, analysts say (see "What's Next for BAM," above).

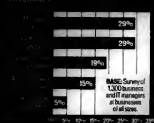
The vice president of operations at a Fortune 100 financial services firm uses the SeeRun Platform, a suite of products from SeeRun Corp. in San Francisco, to monitor cases in a complex workflow environment. The firm, which the executive asked not to be named, manages some 50,000 cases per year, and each can last a year and involve dozens of milestones. The firm has signed contracts with its clients guaranteeing performance against operational metrics related to these milestones. If a task is supposed to be completed within 24 hours but isn't, an alert is generated for the appropriate manager.

"Even more helpful is receiving live activity-tracking along the way — at six hours, 12 hours, 18 hours and so on," the vice president says. The system has improved performance and reduced expenses, and it even serves as a marketing tool that can prove performance to prospective clients, he says.

But the operations vice president issues this warning: to would-be BAM users. "The biggest challenge is what to do with all the data. You can actually over-engineer something like this. If you get too many stakeholders involved, everybody wants their own particular metric. Our experience has been to keep it focused and simple." ☐ 42407

Top Goals for Measuring and Monitoring

Respondents to a Ventana Research survey (see story on page 30) ranked these goals for measuring and monitoring business activity.



Continued from page 27

There is no precise definition of BAM products. They incorporate concepts from — and sometimes are built on — ERP, business intelligence (BI), business process management and enterprise application integration (EAI) software. Most vendors of those types of products claim to have BAM offerings.

And BAM isn't a new concept; credit card companies have had real-time fraud monitors for years, and manufacturing facilities have real-time error-detection software built into their assembly lines.

Most companies monitor their business activity, but it's often after the fact — too late to head off a problem such as a missed bid deadline or the loss of a major customer. "The conventional wisdom has been to just take transactional data and move it to the data warehouse and then to the BI system," says Mike Smith, a senior vice president at Ventana Research in Belmont, Calif. "But those systems aren't responsive."

Indeed, BAM applications generally don't take data from a data warehouse; they pluck it in real time from the applications where it originates — order entry, accounts receivable, customer relationship management and so on. Output takes a variety of forms, including dashboards, e-mails, pager alerts and conventional reports.

"What's new with BAM," Smith says, "is we've taken the subcomponents of technologies that have matured in the last three to four years and put them together to provide more relevant information in a much more responsive fashion." These components include EAI, event management, rules, workflow monitoring and alerting technology, he says.

"BAM tools seem to work," says Gartner analyst Bill Gassman. On the other hand, he says, most BAM applications today aren't very sophisticated. They tend to be narrowly focused — one could be designed to watch for a malfunction on an assembly line, for example. "But what if there are external factors, like a FedEx shipment of parts is late? How do you integrate that?" Gassman asks. Recognizing such concerns, vendors are starting to build BAM into their supply chain products, he says.

Montgomery says BAM enables him to manage his

BUSINESS ACTIVITY MONITORING today is based on first-generation tools, but in a few years, BAM systems will become tightly coupled to business process management systems, says Gartner analyst Bill Gassman. BAM applications may send alerts in a publish-subscribe model to lots of EPM systems throughout the enterprise. Events go in and alerts come out, but those alerts just become events in other applications.

For example, Gassman says, a BAM system could generate an alert that the estimated date of a package delivery had slipped. A CRM system and a BPM system might each subscribe to such "package due-date change" alerts, extending the usefulness of the alerts.

Over time, BAM systems will include ever more sophisticated rules of logic. They eventually will be capable of finding hidden patterns in current business activity by dig-

ing on-the-fly analysis of historical data, says Bill Jacobs, a senior product manager at Sybase Inc. in Dublin, Calif. "If a process is beginning to go south, typically the early users of that are hard to see," he says. "Eventually, we'll see BI and BAM merged at the level of using historically recorded data to identify problems much earlier."

But doing that will require much network bandwidth and computer power. "There are a couple of more cycles of Moore's Law required," Jacobs acknowledges.

Even further out lies the Holy Grail of BAM, Jacobs adds. That's when a system not only sees a problem coming but also goes beyond sending alerts to actually fixing the problem — automatically reordering a part when it sees that a shipment has been lost, for example. "That's a sort of automatic response, a self-learning system," he says.

— Gary H. Arndt

company more proactively. "Before, I'd have to wait until a customer called with a complaint or I'd have to wait until the month-end financial statements to really get a feel for how the business was doing."

Montgomery generally gives his employees free rein to use Exact Event Manager and to define alerts, which can be triggered by events in the company's front-end systems, such as CRM, and back-office systems, such as purchasing, inventory, order entry and accounting. "Anyone who needs to know something now has no excuse not to know that thing," he says.

Heads Up

The Albuquerque city government uses NoticeCast from Cognos Corp. in Burlington, Mass., to proactively push e-mail notices of important events — in near real time — to city employees, residents and vendors. NoticeCast sits outside the city's firewall on an extranet and monitors events by periodically querying Oracle Corp. tables populated by municipal systems. It alerts city managers to events and notifies outside parties of government actions. For example, it does the following:

- Every morning, NoticeCast sends an e-mail to each vendor that was issued an electronic payment during the night, directing the vendor to a Web site on the extranet where it can get a remittance report.

- Every evening, NoticeCast sends an e-mail to each Albuquerque resident for whom a water bill was produced. The e-mail contains all the pertinent billing information and directs the resident to a Web site where he may pay his bill online.

- Once a day, the system sends e-mail to certain city employees, letting them know of all online payments made to the city during the past 24 hours.

- Whenever a candidate files a contribution report, NoticeCast sends e-mail to city employees responsible for tracking campaign law compliance.

The e-mail alert system helps the city track events faster and more thoroughly than before, says Chris Framel, a systems analyst for the city. "And before NoticeCast, we didn't do [electronic] payments at all because it was so difficult."

Framel says the city may buy a license to use NoticeCast inside the firewall on its intranet, something else that is "quite expensive." It would be used to monitor financial and payroll systems. "For example, we could monitor overtime abuses and sick-leave abuses," he says.

Some BAM systems are pretty basic, simply letting a user know whether an event has occurred. Others apply user-supplied rules and Boolean logic and are more complex. At Davis Controls, for example, when a promised order-delivery date is missed, one e-mail alert is generated for the responsible salesperson, one goes to the customer with an apology, and one goes to an expediter. Different e-mails go to new customers, depending on the size of their initial orders.

Over the next few years, BAM systems will employ increasingly powerful logic, analysts say (see "What's Next for Bam," above).

The vice president of operations at a Fortune 100 financial services firm uses the SecRun Platform, a suite of products from SecRun Corp. in San Francisco, to monitor cases in a complex workflow environment. The firm, which the executive

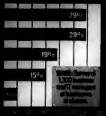
VENDORS

For a list of vendors offering BAM software, visit our Web site. Q42401.computerworld.com

asked not to be named, manages some 50,000 cases per year, and each can last a year and involve dozens of milestones. The firm has signed contracts with its clients guaranteeing performance against operational metrics related to these milestones. If a task is supposed to be completed within 24 hours but isn't, an alert is generated for the appropriate manager.

"Even more helpful is receiving live activity-tracking along the way — at six hours, 12 hours, 18 hours and so on," the vice president says. The system has improved performance and reduced expenses, and it even serves as a marketing tool that can prove performance to prospective clients, he says.

But the operations vice president issues this warning to would-be BAM users: "The biggest challenge is what to do with all the data. You can actually over-engineer something like this. If you get too many stakeholders involved, everybody wants their own particular metric. Our experience has been to keep it focused and simple." **Q42407**



GRAPH: TREVOR WILSON/STREETART



SAS, the leader in business intelligence software, challenges...

**Comply with Sarbanes-Oxley now.
Or prepare for the consequences over time.**



ENTERPRISE INTELLIGENCE

SUPPLIER INTELLIGENCE

ORGANIZATIONAL INTELLIGENCE

CUSTOMER INTELLIGENCE

INTELLIGENCE ARCHITECTURE

With Sarbanes-Oxley compliance deadlines less than a year away, there is an urgency to deliver financial and operational transparency – one clean, consolidated and truthful version of data for all your disclosure controls and procedures. SAS® Corporate Compliance software provides auditable, searchable process and document control solutions. So you can prepare now, while creating a system that won't be outdated when the next new legislation is enacted. Our intuitive interfaces are designed for users of any skill level – with a central point of control to manage across all environments – and an open, adaptable architecture. To find out more about how to confidently comply with Sarbanes-Oxley, including Section 404, call us toll free at 1 866 270 5729 or visit our Web site.

www.sas.com/sox

The Power to Know.



SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration.
© 2005 SAS Institute Inc. All rights reserved. 250003US 1/05

EMERGING TECHNOLOGIES

OUTLOOK: Voice authentication technologies promise users secure, simplified access to IT systems, but deployments are hampered by a lack of standards and concerns over accuracy.
By Kym Gilhooly

WITH TENS OF THOUSANDS of freight customers throughout the U.S., Union Pacific Railroad moves a lot of material. Because of security requirements, Union Pacific follows strict processes to ensure that the customer releasing a rail car after it's unloaded is authorized to do so. In addition to a secure Web application that handles such releases, the rail carrier has added a voice authentication application for users who don't have access to computers — people working in a rail yard or at a shipping dock, for example.

"We need to make sure that the person releasing the car is the person who received it, that the person works for the company, and that it's a valid car number," says Charlie Duckworth, senior director of e-commerce at the Omaha-based company. "It's particularly important when you get into homeland security issues and you're moving hazardous materials."

Using SpeechSecure, from Peabody, Mass.-based ScanSoft Inc., Union Pacific securely authenticates callers and has been able to offload a large percentage of calls that were previously handled by call center representatives.

The growing need to buttress security for access to business-critical systems has many companies looking at voice authentication and other biometric technologies, which can identify individuals based on their unique biological characteristics.

A Sound Technology

Voice authentication captures a person's voice — the physical characteristics of the vocal tract and its harmonic and resonant frequencies — and compares it to a stored voiceprint created during an enrollment process. The technology is generating interest for use in secure applications that involve repeatable actions and where large numbers of people need to be authenticated. These include systems that handle remote network and system access, password reset, time and attendance records and inmate verification, in vertical sectors such as law enforcement, financial services and health care.

TUNING KEY TO VOICE SYSTEMS**TECH CHECK**

A big issue for businesses implementing voice authentication applications is how to tune the system to reduce errors known as false acceptances and false rejections. False acceptance occurs when an imposter gains access to a system; false rejection occurs when an authentic user doesn't. The frequency of these errors is measured using metrics known as false acceptance rates (FAR) and false rejection rates (FRR).

A voice authentication system plots the interplay of the two error rates against each other to establish an access threshold. If the threshold is changed to lower one error rate, the other one automatically goes up. To make a system effective, companies must strike a balance between the two, depending on the intent of their voice applications.

"Voice authentication is suited to situations where you have a relationship with the user, where they call repeatedly, and where you're going to decrease costs or increase revenue and user satisfaction," says Samir Nanavati, a partner at International Biometric Group, a consultancy in New York.

However, to realize the expectations that both the public and private sectors have for it, voice authentication must overcome several hurdles. As with any technology that allows access to sensitive systems, there are concerns about whether voice authentication systems can be compromised and whether they remain accurate when environmental conditions aren't ideal. In addition, technologies are still largely proprietary, with few standards in place. And voice authentication, like all biometric technologies, must overcome privacy concerns that arise from the use of biometric data.

"Voice is one of the least accurate biometrics in that it has to deal with a person's state of health, day-to-day changes in voice, and equipment issues," says Jackie Fenn, an analyst at Gartner Inc.

Nonetheless, as a biometric identifier, voice authentication also has much to offer, say experts. Because people can use a telephone to enroll in a system and authenticate themselves, there's no need to be physically present at a specific location to use a system. And users are more comfortable with the idea of speaking to identify themselves than they are

MAKING ACCESS A FIGURE OF SPEECH

"With applications, it really does depend on the intent of speaker verification," says Kevin Farrell, director of speaker verification at ScanSoft. "If it's there as a customer-oriented convenience, and helps with costs in the call center, you might use a lower threshold, whereas you'd use a higher or threshold for financial transactions."

But by themselves, FAR and FRR don't mean much, says Samer Nassef, a partner at International Biometric Group. What matters, he says, is the combination of those with a third metric, the enrollment rate. "It doesn't matter what your FAR and FRR rates are if you fail to enroll 90% of your user population," he says.

What organizations should be looking at, says Nassef, is a system's ability to verify. "From a business perspective, especially in the private sector, companies really don't care why you couldn't use a system. They primarily care that they have 12 million customers, and whether a system can handle that."

—Kym Gilhooly

with submitting to, say, an iris or fingerprint scan.

"There's a lot going for voice authentication. You don't need to have specialized equipment in all your locations, just access to a telephone, so it has a key advantage from a logistics standpoint," says Elizabeth Herrell, an analyst at Cambridge, Mass.-based Forrester Research Inc.

Prianka Chopra, an analyst at Frost & Sullivan, concurs. "It's natural to use one's voice and widely accepted, and it's the only biometric that provides remote authentication," she says.

Voice Concerns

Successful use of any biometric system depends on the environment, applications and the user population. In accuracy tests in lab settings, voice authentication systems compare favorably with other biometric systems. In real-world use, however, they have to deal with behavioral and environmental factors such as background noise or changes in users' voices.

One of the biggest challenges stems from cross-channel issues — when a person uses a different type of phone to authenticate than the one he used during the enrollment process, says Larry Heck, vice president of research and development at Nuance Communications Inc., a provider of speech technology in Menlo Park, Calif. In the mid-'90s, Heck says, SRI International and MIT were working on that problem. Along with other vendors, Nuance has continued

that work, using speaker model synthesis to develop a machine-learning algorithm that identifies what has changed in a voice template based on changes in the equipment used, creating a transform template for each kind of equipment.

Model adaptation is also key to improving accuracy, says Kevin Farrell, director of speaker verification at ScanSoft. Here, the parameters of the verification are adjusted based on slight changes in a person's voice, making a template more accurate over time.

"Some people can use a system all the time and it's stable, but some people have more natural variances, even though it's subconscious," says Farrell. He says some caution has to be applied, because a model will adapt if an impersonator with a high enough match score goes through.

As for security concerns, voice authentication applications typically use two-factor authentication, where a user provides something that shows who they are — their voice — along with something they know, such as a password or an account number. In these cases, voice authentication is combined with speech recognition to identify what the speaker is saying.

"Voice authentication does well when combined with a backup process, and that's where speech recognition comes in," says Judith Markowitz, president of Chicago-based voice biometrics consultancy J. Markowitz, Consultants.

If a user is initially verified by a voice system, he can then be asked context-related questions, via

speech-recognition technology, for additional security. If the user can't answer the questions, he's rejected and, where appropriate, sent to a live agent.

Despite these accuracy and security advancements, voice authentication technologies need to incorporate more standards if they're going to find major acceptance. Work is ongoing in such efforts as CBEFF (the Common Biometric Exchange File Format) and VXML (Voice Extensible Markup Language), and for programming interfaces such as BAPI (Bio API) and vertical standards such as the

ANSI X9.84-2001 specification, which provides for secure remote electronic access or local physical access control in financial services.

Though voice authentication adoption to date has been low — International Biometric Group says that this year, voice authentication will account for just 4.1% of the \$928 million biometrics market — the business needs for improved remote access security and end-user satisfaction

will ultimately drive its use, says Forrester's Herrell.

"Voice authentication is not a spooky business, and it's going to be used for business, especially in highly regulated industries, and not top-level national security," she says. "Rather than feeling it's invasive, I think users will appreciate it that businesses are protecting them with this kind of technology." ■ 42362

Gilhooly is a freelance writer in Falmouth, Maine. You can reach her at kymg@maine.rr.com.

THE NEXT STEP

Q&A: International Biometric Group's Samer Nassef discusses the future potential of voice authentication.

QuickLink 42364

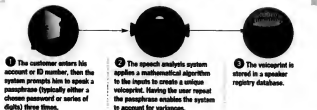
For a sampling of voice authentication technology vendors, visit our Web site

QuickLink 42368

www.computerworld.com

HOW VOICE AUTHENTICATION WORKS

STEP ONE User Enrollment



STEP TWO User Authentication



I AM A CISCO CATALYST 6500.



I AM A SNARLING PACK OF DOBERMANS.

I AM INTEGRATED SECURITY. I HAVE THE POWER TO PROTECT YOUR NETWORK FROM THE INSIDE, THE OUTSIDE AND FROM EVERYWHERE IN BETWEEN. I ALWAYS KNOW WHO IS ON THE GUEST LIST AND HAVE THE POWER TO DENY THOSE WHO AREN'T ON IT. I SNIFF OUT THREATS SO YOU CAN STAY PRODUCTIVE. I AM MORE THAN A CISCO CATALYST 6500.



THIS IS THE POWER OF THE NETWORK. NOW.

cisco.com/securitynow



Loves Lucy

Digital orangutan may reveal brain functions.

She may be only a robot baby orangutan, but someday Lucy may tell us about how the cerebral cortex of the brain works.

And when she does, she'll be able to help people develop and build new computational architectures inspired by biological systems, as well as applications based on those systems that are more adaptable, intelligent and robust, according to Steve Grand, Lucy's creator.

Grand, a recognized authority on artificial life and the founder of Cyberlife Research Ltd., an artificial intelligence research company in Somerset, England, has written a book about Lucy, *Growing Up With Lucy: How to Build an Android in Twenty Easy Steps* (Weidenfeld & Nicolson), due out in January.

Grand says he hopes Lucy can tell him the basic operating principles of the brain — engineering that evolution

discovered when it came to making nervous systems but that mankind hasn't yet unraveled. He is looking to use the neural building blocks of the brain as a map for creating AI.

Grand says there are two kinds of AI: "soft" AI, which tries to create high-level reasoning by explicitly programming rules fit into a computer, and "hard"

AI (this preference), which involves making machines that are genuinely intelligent and can teach themselves. Enter Lucy.

"What I'm interested in are ... the principles that enable a brain to organize itself into a set of machines that enable it to do all the things that brains do," Grand says. He wants to find the basic principles that enable the cerebral cortex to wire itself up in response to experience, until it becomes a very complex and specialized set of computing machines.

"How does that happen? It's completely unlike any technology we've ever made. It's as if you could take 80 million transistors and stick them in a heap on the carpet and show them Microsoft Office, and half an hour later, they'll spontaneously assemble themselves into a computer."

Grand says he wants to replicate that in Lucy with neural networks simulated on PCs. Lucy's intelligence will be a consequence of the interactions between thousands of simulated neurons. His goal is to develop a machine that can supplement or even supercede the digital computer — a machine that can think and learn.

On Her Own

Grand says Lucy is developing the ability to learn by herself. So far, she has learned to point to a banana — any banana: a green banana, a yellow banana, a big banana, a small banana. If you show her an apple and a banana, she points to the banana.

Grand says he hasn't programmed Lucy to do that; instead, he has given her a model of the bit of cerebral cortex that knows how to do it. "It doesn't sound like a huge achievement. Why not just program a computer to recognize yellow?" he asks.

But, he says, Lucy solved a whole series of problems by herself like detecting the lines that form the edges of the banana regardless of what position it's in or how far away it is, and she figured out how to point at it.

Thanks to a \$68,000 grant from The

National Endowment for Science, Technology and the Arts in London, Grand purchased 15 new computers and is building an improved Lucy.

When Lucy's new body is complete, she should have a voice as well as better eyesight and hearing, and she should be able to move her arms and legs, Grand says. He hopes Lucy will soon be learning to crawl and ultimately walk. He also hopes she will be able to repeat simple sounds, like toddlers do.

"Lucy won't be very smart, but it won't be far from the truth to say she'll have a mind of her own, albeit a very, very stupid one," Grand says.

Think of the robots that build cars, Grand says. "They don't adapt. If they go to pick up a part and it's not there, they pick up air. We have to build them so that one day they will be able to adapt to different situations."

But the question remains: Will he be able to do it?

Limits of Knowledge

Well, maybe, says Larry Yaeger, an expert on AI and a distinguished scientist at Apple Computer Inc. who lives in Bear Blossom, Ind. "With Lucy, I [Grand] appears to be taking no shortcuts with sensory inputs or motor outputs, as he is striving to integrate real vision and audition, as well as voice, smell and legs," Yaeger says.

That said, Yaeger claims that the greatest difficulty Grand faces is mankind's limited knowledge of human brains. "The wiring diagrams, the details of the different kinds of neural and synaptic mechanisms and the almost unexplored influence of the baths of chemicals our brains are swash in, I will very much in its infancy," he says. "But it's possible that what we already know is enough for Steve to succeed."

But, Yaeger cautions, "I believe that ... the complexities of those wiring diagrams are more likely to yield to evolution than to engineering. [Grand] believes design is the answer. I think evolution, and a willingness to evolve and learn from very primitive organisms first, before we hope to obtain simian or human-level intelligences in the computer, may be the better approach. But if anyone on the face of the earth can engineer intelligence from scratch, I believe it would be Steve Grand." ♦ 42400

INSIDE AI

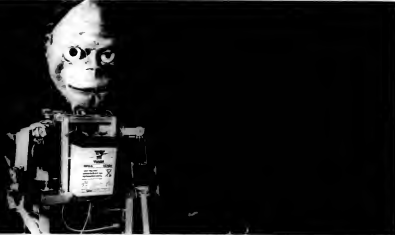
For the nuts and bolts of Lucy go online to

QuickLink 42549

For more applications of AI, visit our Website

QuickLink 42550

www.computerworld.com



AI Loves Lucy

Digital orangutan may reveal brain functions. By Linda Rosencrance

She may be only a robot baby orangutan, but someday Lucy may tell us about how the cerebral cortex of the brain works.

And when she does, she'll be able to help people develop and build new computational architectures inspired by biological systems, as well as applications based on those systems that are more adaptable, intelligent and robust, according to Steve Grand, Lucy's creator.

Grand, a recognized authority on artificial life and the founder of Cyberlife Research Ltd., an artificial intelligence research company in Somerset, England, has written a book about Lucy, *Growing Up With Lucy: How to Build an Android in Twenty Easy Steps* (Wiley & Nicolson), due out in January.

Grand says he hopes Lucy can tell him the basic operating principles of the brain — engineering that evolution

discovered when it came to making nervous systems but that mankind hasn't yet unraveled. He is looking to use the neural building blocks of the brain as a map for creating AI.

Grand says there are two kinds of AI: "soft" AI, which tries to create high-level reasoning by explicitly programming rules for it into a computer, and "hard"

AI (his preference), which involves making machines that are genuinely intelligent and can teach themselves. Enter Lucy. "What I'm interested in are ... the principles that enable a

brain to organize itself into a set of machines that enable it to do all the things that brains do," Grand says. He wants to find the basic principles that enable the cerebral cortex to wire itself up in response to experience, until it becomes a very complex and specialized set of computing machines.

"How does that happen? It's completely unlike any technology we've ever made. It's as if you could take 50 million transistors and stick them in a heap on the carpet and show them Microsoft Office, and half an hour later, they'll spontaneously assemble themselves into a computer."

Grand says he wants to replicate that in Lucy with neural networks simulated on PCs. Lucy's intelligence will be a consequence of the interactions between thousands of simulated neurons. His goal is to develop a machine that can supplement or even supercede the digital computer — a machine that can think and learn.

On Her Own

Grand says Lucy is developing the ability to learn by herself. So far, she has learned to point to a banana — any banana: a green banana, a yellow banana, a big banana, a small banana. If you show her an apple and a banana, she points to the banana.

Grand says he hasn't programmed Lucy to do that; instead, he has given her a model of the bit of cerebral cortex that knows how to do it. "It doesn't sound like a huge achievement. Why not just program a computer to recognize yellow?" he asks.

But, he says, Lucy solved a whole series of problems by herself like detecting the lines that form the edges of the banana regardless of what position it's in or how far away it is, and she figured out how to point at it.

Thanks to a \$68,000 grant from The

National Endowment for Science, Technology and the Arts in London, Grand purchased 15 new computers and is building an improved Lucy.

When Lucy's new body is complete, she should have a voice as well as better eyesight and hearing, and she should be able to move her arms and legs, Grand says. He hopes Lucy will soon be learning to crawl and ultimately walk. He also hopes she will be able to repeat simple sounds, like toddlers do.

"Lucy won't be very smart, but it won't be far from the truth to say she'll have a mind of her own, albeit a very, very stupid one," Grand says.

Think of the robots that build cars, Grand says. "They don't adapt. If they go to pick up a part and it's not there, they pick up air. We have to build them so that one day they will be able to adapt to [different situations]."

But the question remains: Will be be able to do it?

Limits of Knowledge

Well, maybe, says Larry Yeager, an expert on AI and a distinguished scientist at Apple Computer Inc. who lives in Bean Blossom, Ind. "With Lucy, [Grand] appears to be taking no shortcuts with sensory inputs or motor outputs, as he is striving to integrate real vision and audition, as well as voice, arms and legs," Yeager says.

That said, Yeager claims that the greatest difficulty Grand faces is mankind's limited knowledge of human brains. "The wiring diagrams, the details of the different kinds of neural and synaptic mechanisms and the almost unexplored influence of the baths of chemicals our brains are swash in, [are] still very much in its infancy," he says. "But it's possible that what we already know is enough for Steve to succeed."

But, Yeager cautions, "I believe that ... the complexities of those wiring diagrams are more likely to yield to evolution than to engineering. [Grand] believes design is the answer. I think evolution, and a willingness to evolve and learn from very primitive organisms first, before we hope to obtain human or human-level intelligences in the computer, may be the better approach. But if anyone on the face of the earth can engineer intelligence from scratch, I believe it would be Steve Grand." **Q 42400**

INSIDE AI

For the rules and bits of Lucy, go online to: [QuickLink 42548](http://QuickLink.42548)

For more applications of AI, visit our Web site:

Q QuickLink 42550
www.computerworld.com

**FUTURE
WATCH**



Goodbye Hackers

The right management should do more than just protect.
It should also enable.

eTrust Security Management Software

With eTrust security management software, your information isn't just safeguarded from internal and external threats. We provide authorized customers, partners, and employees with appropriate access that can help your business grow. In addition to securing data, eTrust also provides a single view of your security environment, so you can make real-time decisions based on comprehensive information. If you're looking for ways to minimize risk while maximizing your potential, or to get a white paper, go to ca.com/security.



Computer Associates®

© 2003 Computer Associates International, Inc. (CAI). All rights reserved.

Hello Customers

SSL Broadens VPN Access

Affordable Secure Sockets Layer virtual private network opens corporate network to more users than a hardware VPN, but it presents new challenges. By Vince Tuesday

THE MOST IMPORTANT document a security professional can write isn't a policy document, it's his résumé.

I've been checking résumés lately because we need to replace a member of my staff who's moving to our New York office.

One went on at length about the applicant's ISO 7799 skills and experience, and ISO 7799 is the international standard for "Metallic materials—sheet and strip 3mm thick or less—Reverse-bend test." I imagine the candidate meant ISO 17799, "Code of practice for information security management." Reject.

Even candidates who managed to avoid résumé errors fell by the wayside. One decided to give up during the phone interview because he felt he'd blown it; he hadn't until he told me he wanted to give up. Another merely told me his corporate LAN password during the interview.

Between filtering résumés and arranging interviews, I have to do my real job. This week, it involved getting approval for a lightweight secure remote-access system.

Last month, I wrote about the full virtual private network (VPN) that we're launching [QuickLink 42098]. But that requires a company machine at the remote end with layers of hardware and software, so many users are excluded from using it because of the cost. But many users who lack a

company machine and connection would like to access e-mail and other applications. Increasing numbers of staffers have broadband connections. If we had a lightweight remote-access system, they would be able to work longer.

Our IT group has designed a Secure Sockets Layer (SSL) VPN from Fort Lauderdale, Fla.-based Citrix Systems Inc. that lets users access our network over the Internet using only a Web browser.

However, there are security problems with any remote-access method. In this case, by opening our corporate network to the outside world, we might leak important data or allow attackers to get past our defenses. We use Bedford, Mass.-based RSA Security Inc.'s SecurID technology to authenticate each remote user. We also use SSL to encrypt data in transit.



[The VPN] requires a company machine ... with layers of hardware and software, so many users are excluded from using it because of the cost.

This all sounds properly secure, but what if the remote end is infected with a worm or a virus? An infected remote machine could hijack the session or record keystrokes of internal passwords. This can happen in the period after the initial authentication and before the system encrypts the data to be sent.

We're very kee-ee not to be caught in that way, and yet we can't rely on remote users to install, configure, update and maintain decent antivirus software. Home users, like corporate IT, get sloppy and miss updates, but with home users, we aren't there to monitor and catch the problems. Also, some staffers will be accessing the system from Web cafes around the world, so we can't even rely on our client software being in place.

Work-around

To get around this issue, we are using Austin-based Whole Security Inc.'s Confidence Online virus-checking tools. These tools are downloaded and run every time the user connects over the Web. They look for common Trojan horse and key-logging software and deny connections if the remote end is infected.

I was initially a bit suspicious of the product because I had heard that this kind of software often compromises on security due to the difficulty of getting code small enough to download and run quickly over a remote connection. Some competing products just look for the name of a Trojan horse, but few attackers are polite enough to run their software using a well-known backdoor name.

The Trojan-horse checker didn't fall short. I was im-

pressed that it was clever enough to spot Trojans in which the executable file names had been altered. I was even more impressed when I ran the final stage of my tests.

I infected a machine with tens of Trojan horses and then cleaned it out using our company-standard antivirus software. You'd think that once I'd deleted everything that the antivirus software complained about, it would be safe to connect. But no, the Trojan-horse-checking software wouldn't let me in until I deleted five versions of Trojans that the antivirus software didn't spot.

I'm happy that the Trojan-horse checker worked so well, and I've given the green light to the VPN software. However, the test results have revealed a new set of problems. If our antivirus software doesn't detect the Trojan horses, how do we know we don't have them internally? Antivirus vendors have been sued by software writers who claim that their Trojan horses are legitimate remote-control tools. If antivirus programs don't pick up Windows Terminal Services, then they shouldn't detect their products, they claim. I don't buy that, and I hope Confidence Online keeps detecting as well as it can.

I'm looking into rolling out the Trojan-horse checker into our Intranet Web servers so that desktops can be checked from a central location whenever they access the phone book. Perhaps we can run the tests as part of a log-in script when users authenticate. It feels odd to know that our external users may be better protected than insiders. Perhaps if I finally get an applicant who knows the difference between bending metal and security management, he can help solve these problems. ■

WHAT DO YOU THINK?

This week's journal is written by a real security manager. "Vince Tuesday," whose name and employer have been disguised for obvious reasons. Contact him at vince.tuesday@citrix.com, or post his discussion in our forum. QuickLink 42098 to find a complete archive of our Security Manager's Journal, go online to computerworld.com/blogsj

SECURITY LOG

Security Bookshelf

Practical Unix & Internet Security, by Thomas Bernfield, Gary Spafford and Alan Kohonen; O'Reilly & Associates Inc., 2002



Written by the team that defined the classic approach to Unix security, this third edition of this reference covers all the basics, including the latest Internet and Unix security challenges. If you want to be taken seriously as a Unix system administrator or a power user, then you need to understand and prepare solutions to security problems. This comprehensive 1,000-page book provides the background, tools and suggestions from administrators needed to understand Unix and Internet security. The latest edition explains in much more information than the second. I particularly liked the detailed coverage of file DS 2, which I haven't seen anywhere else. It's a worthy update.

—Steve Tuesday

Mazzy Updates Net Traffic Analyzer

A newly released version of Mazzy Networks Inc.'s ProFiber network traffic analysis product can spot encrypted network activity and track applications that use so-called ephemeral ports, which pass a security check by comparison, says the Cambridge, Mass.-based network security vendor. Mazzy ProFiber Version 3.1 is designed to offer improved features for creating new and custom policies for a network. It also has improved reporting capabilities for forensic analysis of compromised networks and contains features that enable administrators to track the transfer protocol (FTP) servers that don't rely on a predefined communication port. These enhanced ports can make FTP applications difficult to track and monitor, Mazzy says.

Out of Space

The right management can increase
the storage capacity of your existing infrastructure.

BrightStor® Storage Management Software

All the hardware in the world can't solve increasingly complex data storage problems. That's why it's more important than ever to have the right management software. With BrightStor storage management software, you can now maximize every bit of your existing bytes so your hardware can perform to its full potential, rather than operate at partial capacity. In addition, you can not only store data, but actually access it when you need to in order to make smarter business decisions. BrightStor also integrates easily with all of your existing software and hardware and is automated so your employees can focus on the business, not the process. Best of all, better storage management means lower total cost of ownership and higher ROI. So you may even need to make more space for revenue on your bottom line. To find out how to make the most of your IT storage environment, go to ca.com/storage.



Computer Associates®

© 2003 Computer Associates International, Inc. (CAI). All rights reserved.

Tons of Space

BRIEFS

New Integration Platform Arrives

InterSystems Corp., in Cambridge, Mass., last week announced an integration platform called Ensemble that comes with integration and application servers, an object database, and development and management tools. Ensemble is available now on Unix and Windows. Pricing starts at \$125,000 per CPU.

Unifact Launches .Net Analysis Tool

Desktop-based Unifact Corp. has introduced UniFact Analytics, a browser-based ad hoc data analysis tool that's designed to work with Microsoft .Net client Web technology. UniFact Analytics offers the power of an enterprise analytical processing/analysis tool while providing a dashboard-style interface, said Unifact. The system, which includes low-bandwidth support for remote users, is priced starting at \$10,000.

Serena Upgrades TeamTrack System

Serena Software Inc. is shipping Version 6 of its TeamTrack process management software for application development teams. New features include a management dashboard portal, a role-based user interface and a Web-based, configurable workflow library. An implementation for 25 users sells for about \$27,000, said a spokeswoman for San Mateo, Calif.-based Serena.

Manugistics Offers RFID Support

Manugistics Group Inc. is offering support for radio frequency identification (RFID) tag technology in its supply chain management software products. RFID-enabled products include the Rackville, Md., company's fulfillment and transportation optimization software and its order and delivery management products.

ROBERT L. MITCHELL

Warning: Don't Buy Security Snake Oil

NO INDUSTRY has more false prophets, blowhards and snake oil salesmen than IT security. IT professionals just want secure, well-designed technologies. What they usually get are core technologies with security holes (which hackers regularly strafe with probes and attacks), Band-Aid fixes, empty promises, questionable advice and a shower of "must-have" appliances that clog up the network perimeter more densely than a Washington Beltway traffic jam.

Certainly, corporate IT has had a role to play in allowing the current, sad state of affairs to unfold, as Computerworld columnist Paul A. Strassmann pointed out last week ("CIOs Share the Blame," ClickLink 42431).

But let's not forget about the vendors of security products and services that promote themselves as your salvation from hacker attacks, viruses and other threats. They're really just selling you products — and more of them every day.

The unwelcome truth is that most security products are compensating for vulnerabilities in the basic IT architecture, an infrastructure that was never designed to be lashed onto the anarchic, business-unfriendly wide-area network that is the Internet. Businesses have even opened up their data centers to this vulnerability-riddled WAN. Think back for a minute. If you had dumped that value-added network service back in 1994 for such a disorganized and unsecured communications network, you'd have been out of a job.

But here you are, working with security tool vendors that tout "solutions" but whose business depends on maintaining a rather unhealthy symbiosis between themselves and the hackers against whom you need to be protect-



ed. A billion-dollar industry has been built by treating the symptoms, rather than the cause. Years ago, one antivirus software vendor enthusiastically offered a reward to those who "discovered" a virus in the wild so that it could be the first to offer a signature. Negative publicity stopped this pay-the-hacker strategy in its tracks. But today, virus writers and antivirus vendors are still locked in a strange embrace. Hackers get a cheap thrill from rising to the top of vendors' top 10 lists. Vendors get to sell a steady flow of new antivirus signatures.

Meanwhile, a small army of security experts with their own biases bludgeoned and nauseated about what's wrong with IT security while constructing grand theories about how wonderful things would be if everyone would just do as they say. The most recent distraction: a return to heterogeneous computing on the desktop.

This simplistic line of thinking applies the idea of biodiversity to the health of one's IT infrastructure. A mixed computing environment of Macintosh, Linux and Windows PCs should be more resistant to threats, proponents say. Several pundits support this idea, including Dan Geer, former CTO at Cambridge, Mass.-based

security services firm @stake Inc., who was fired from his job in September for co-authoring a controversial report called "CyberInsecurity: The Cost of Monopoly. How the Dominance of Microsoft's Products Poses a Risk to Security." Even Gartner has promoted this idea.

But the authors' thinly veiled resentment of the Microsoft "monoculture" (read: "monopoly") and the Windows vendor's failure to address their security concerns comes off more like a call for insurrection than a well-thought-out security strategy for the enterprise. And why focus myopically on Microsoft when there's plenty of blame to go around? What about the Cisco "monoculture"? Or Intel?

IT diversity can certainly lessen the impact of a security event by limiting the damage to a subset of machines. But there's a reason why IT planners have largely standardized on a single desktop operating system: It's easier to manage. It took years to standardize the desktop on one operating system.

Does any sane IT organization really want to replace 50,000 PCs with a mix of Macs, Linux and Windows machines and then re-engineer the management tools, support and application sets to make it all work? And heterogeneity is less of a concern in the server world, where competing operating systems already exist in many capacities.

I can't tell you the specifics of how to solve these problems. But it's clear to me in talking with Computerworld readers that corporate America is running out of patience. The Internet and the IT infrastructures that connect to it must evolve quickly to a more structured and secure form, or the business that depends on them today will be conducted elsewhere. ☐ 42H18

WANT OUR OPINION?

For more columns and links to our sections, go to www.computerworld.com/opinion



Supply Chain vs. Supply Chain
IT has a big — and difficult — role to play as the nature of business competition changes from company vs. company to supply chain vs. supply chain. **Page 44**



OPINION

Outsourcing's Dirty Little Secret

Bart Perkins says many users wind up unhappy with their outsourcing deals, for reasons ranging from "sales puffery" to insufficient performance monitoring. Sometimes it's simply because the excess who were enthusiastic about the deal have left. **Page 46**

Savvy companies are using CRM and special Web features to make wealthy customers feel pampered.

By Steve Ulfelder

WHEN A HIGH ROLLER steps into a Harrah's casino, the host — whose job is specifically to look after

such top players — is likely to ask about his wife by name, tell him his suite has been stocked with his favorite brand of cigars and slip him tickets to that week's PGA golf tournament.

And this personal touch occurs whether the gambler is in the Las Vegas casino he has frequented for years or is visiting Harrah's in Atlantic City for the first time.

The key is Harrah's Entertainment Inc.'s Player Contact System, a sophisticated Web-based application. "Our competitors spend money tearing down [and replacing] casinos," says Tim Stanley, CIO at Las Vegas-based Harrah's. "We spend on technology. If you're a good customer, we do everything we can with IT to retain your business."

Having grasped the reality that the rich are, indeed, not like you and me (if only because they have more money), businesses are using IT to identify, market to and generally pamper them.

Companies hasten to say that they're not slighting those with lesser incomes; Stanley says Harrah's "sweet spot is not the high rollers but the 'middle rollers,'" those empty-nesters who are seldom multimillionaires. Nevertheless, there's no denying the impact of wealthy customers on businesses in industries



such as financial management, travel and leisure, retail and automotive.

According to Gartner Inc. analyst Kimberly Collins, "When organizations do a formal calculation, they often find the 80-20 rule applies — the top 20% of their customers account for 80% of revenue. In some companies, it's 90-10."

With that kind of money on the table, it's no wonder that companies are developing Web sites and CRM systems with an eye toward the affluent. And their results appear to justify the investments — whether they're luring high rollers away from other casinos or tactfully informing a retail customer that those to-die-for Manolo Blahnik kidskin midheel halter pumps will set her back \$445 a pair.

Driver's Seat

Jaguar Cars Ltd., a unit of Ford Motor Co. with North American headquarters in Irvine, Calif., is recommending that its dealerships use a recently upgraded CRM system to identify and please upper-crust customers.

"We're offering technology to help them better track the customers they do have, as well as prospects," says Mary Magrino, IT director at Ford's

Catering TO THE Wealthy

Catering

TO THE

Continued from page 41

Premier Automotive Group, North America, which also includes the Lincoln-Mercury, Ford, Volvo and Acura Marlin brands. "We want the dealers to be able to get more structured information — something more efficient than keeping index cards,"

The CRM tools that headquarters recommends (but doesn't mandate) for Jaguar retailers include Right Relationship 360 from Chicago-based AHP Inc. and Contact Management from The Reynolds and Reynolds Co., a Dayton, Ohio-based vendor.

Once prospects become Jaguar owners, the company takes pains to make them feel that they've joined an exclusive club, according to Melissa Grady, Jaguar's relationship marketing manager. Many of the perks enjoyed by club members have become routine for owners of high-end cars: a toll-free 24-hour roadside assistance number, a complimentary magazine, free maintenance during the warranty period and cross-branding tie-ins with Hertz rental cars and Starwood Hotels.

In addition, the company has launched myJaguar.com, which offers customers a personalized Web site that includes information such as the owner's manual for their model, maintenance-tracking software and recall notices. Grady says Jaguar is updating the site "to make it more personal and highlight customer benefits" but declines to be more specific.

Erin Kinkin, an analyst at Forrester Research Inc. in Cambridge, Mass., calls such customer-specific Web sites prime examples of the extra business-ess bestow on affluent customers.



Showing the most likely interior for Chassis, were more expensive for travel, trucks, bonds and mutual funds, and nondescript apparel.

Jaguar also slices its databases by region to imitate customers to some pretty frosty-toasty affairs. For example, Washington-area Jaguar owners were recently invited to a private premiere, showing of a National Geographic TV special about jaguars in the wild. Jaguar has associated itself with the animal if it's named after because its demographic studies have shown that the conservation pitch is popular with its well-heeled buyers.

Improving the Odds

According to Harrah's Stanley, the \$4.14-billion company's investment in customer-oddyssey technology has helped it prosper — partly because it helps Harrah's pursue a more cost-effective strategy than many competitors. Casinos are generally most profitable during their first few years. When a new facility's glitz fades, profits usually do, too — which is why gambling places are so frequently dismantled and replaced.

But Harrah's has eschewed the trend toward expensive theme-park-style casinos, focusing instead on being what Stanley calls "the top-of-mind choice for serious gamers." With its loyalty program and Player Contact System attracting such customers, including "whales" (industry slang for elite high rollers), Harrah's has increased same-store sales 18 quarters in a row, according to financial statements.

Moreover, Stanley credits the loyalty program and Player Contact System with boosting market share. He says Harrah's metrics indicate that in the past four years, the company's share of customers' total gambling budget has risen from 38% to 43%. "There's a \$1.80 rise in our stock price for every percent increase," Stanley says.

Key components of the Player Contact System include a Teradata active data warehouse from NCR Corp., middleware from Tibco Software Inc. and a new client-facility application from Blue Marlin Software Inc. that was designed for retailers and has been heavily customized by Harrah's.

The Player Contact System is, in turn, one component of Total Rewards, the loyalty system Harrah's has been refining since 2000. The casino chain — which has 26 locations in 13 states

— encourages customers to use a loyalty card for as many purchases as possible, from nickel slots to room charges to swank no-limit tables. The cards feed data back to Harrah's. Stanley says it takes only a couple of visits for the system to make accurate guesses about

The Rich Get Richer

Investment firm Merrill Lynch & Co. is spending an estimated \$1 billion on a system that will allow the company's financial advisers to better collect and share data on customers in its Global Private Client Group, which caters to investors with more than \$1 million in assets. The massive Web services project, which will use Siebel Systems Inc. CRM software as its centerpiece, is being co-developed with The Thomson Corp.

Meanwhile, Fidelity Investments and Charles Schwab & Co. are among the online brokers that offer special services for affluent customers, such as tracking tax information.

It's no accident that online brokers are among the leaders in using IT to reach the well heeled. According to Forrester Research, 44% of investors with more than \$1 million in assets visit their online brokers' Web sites, compared with only 25% of less wealthy investors.

The same Forrester study found that the affluent seek a certain type of luxury experience online. Rather than glitz, they demand "convenience, confidence and control," the report says.

—Steve Uffelder

whether a customer fits into one of the casino's two highest segments, dubbed "avid experience players" and "very important players."

'Addictive' Service

Kinkin, at Forrester's Kinkin, one of the top challenges in dealing with the rich is identifying them in all channels. "Good service is addictive," she says. "Once you get it, you want it all the time." Interestingly, she adds, the laggard channel tends to be the physical store. When an affluent client appears online or calls, customer service representatives in contact centers can immediately peg them as high rollers. This raises the customer's expectations, which may be dashed when he wanders into a store belonging to the same company and is treated like one of the great unwashed.

In that respect, the Seattle Mariners are fortunate: Their regular customers — that is, season ticket holders and luxury suite owners — have assigned seats. Last year, the baseball team switched from a largely paper-based customer-care system to a CRM system

from Onyx Software Corp. in Bellevue, Wash. The software allows the team to track complaints and requests from season ticket holders as well as anybody involved in the team's loyalty program, says Larry Witherspoon, vice president of technology services.

Onyx helps the Mariners pamper suite owners through an approach that marries high touch and high tech. From the time a corporate customer or other high roller calls the club to order a suite, the in-house catering, house-keeping and ticketing groups are automatically notified of any special requests, "and the account exec can just pop in to visit the client" during a game, Witherspoon says. He says the team has reduced complaints from luxury suite holders a whopping 80% since implementing the software.

Searching in Style

Technology aimed at enticing the rich goes beyond CRM. One well-to-do technology company executive with a 1,200-mile weekly commute was such a regular passenger on the same flights up and down the West Coast that his airline took to paying him when those flights ran into delays. Kinkin says this type of proactive service is exactly what companies must offer affluent customers in order to retain their business.

Even the way the rich think about shopping is different, researchers have found, and upscale companies' Web sites are changing accordingly. Last year, Neiman Marcus implemented OneStep, a natural-language search engine from Iphras Technologies Inc. in Cambridge, Mass., at the retailer's Web site. Neiman Marcus' research showed that high-end shoppers are more specific about the items they're seeking than average shoppers. For example, while a Target shopper might simply search for "pocketbooks" and sort by price, a Neiman Marcus customer is more likely to search for "cloth Kate Spade totes with leather trim."

According to a Neiman Marcus spokesman, the retailer has tripled its conversion rate — the percentage of online shoppers who follow through and make a purchase. The spokesman adds that those shoppers return to the site twice as often as they used to. Apparently, the rich know exactly what they want — and if you want their business, you need to know exactly how to deliver. **E 42371**

Uffelder is a contributing writer in Southboro, Mass. Contact him at suffelder@charter.net.

Catering TO THE Wealthy

Continued from page 41

Premier Automotive Group, North America, which also includes the Lincoln-Mercury, Land Rover, Volvo and Aston Martin brands. "We want the dealers to be able to get more structured information — something more efficient than keeping index cards."

The CRM tools that headquarters recommends (but doesn't mandate) for Jaguar retailers include Right Relationship 360 from Chicago-based ADP Inc., and Contact Management from The Reynolds and Reynolds Co., a Dayton, Ohio-based vendor.

Once prospects become Jaguar owners, the company takes pains to make them feel that they've joined an exclusive club, according to Melissa Grady, Jaguar's relationship marketing manager. Many of the perks enjoyed by club members have become routine for owners of high-end cars: a toll-free 24-hour roadside assistance number, a complimentary magazine, free maintenance during the warranty period and cross-branding tie-ins with Hertz rental cars and Starwood Hotels.

In addition, the company has launched myjaguar.com, which offers customers a personalized Web site that includes information such as the owner's manual for their model, maintenance-tracking software and recall notices. Grady says Jaguar is updating the site "to make it more personal and highlight customer benefits" but declines to be more specific.

Erin Kinklin, an analyst at Forrester Research Inc. in Cambridge, Mass., calls such customer-specific Web sites prime examples of the extras businesses bestow on affluent customers.

Jaguar also slices its databases by region to invite customers to some pretty posh-toy affairs. For example, Washington-area Jaguar owners were recently invited to a private premiere showing of a National Geographic TV special about jaguars in the wild. Jaguar has associated itself with the animal it's named after because its demographic studies have shown that the conservation pitch is popular with its well-heeled buyers.

Improving the Odds

According to Harrah's Stanley, the \$4.14 billion company's investment in customer-coddling technology has helped it prosper — partly because it helps Harrah's pursue a more cost-effective strategy than many competitors. Casinos are generally most profitable during their first few years. When a new facility's glitz fades, profits usually do, too — which is why gambling palaces are so frequently dynamited and replaced.

But Harrah's has eschewed the trend toward expensive theme-park-style casinos, focusing instead on being what Stanley calls "the top-of-mind choice for serious gamers." With its loyalty program and Player Contact System attracting such customers, including "whales" (industry slang for elite high rollers), Harrah's has increased same-store sales 18 quarters in a row, according to financial statements.

Moreover, Stanley credits the loyalty program and Player Contact System with boosting market share. He says Harrah's metrics indicate that in the past four years, the company's share of customers' total gambling budget has risen from 35% to 43%. "There's a \$1.0 rise in our stock price for every percent increase," Stanley says.

Key components of the Player Contact System include a Teradata active data warehouse from NCR Corp., middleware from Tibco Software Inc. and a new client-facing application from Blue Martin Software Inc. that was designed for retailers and has been heavily customized by Harrah's.

The Player Contact System is, in turn, one component of Total Rewards, the loyalty system Harrah's has been refining since 2000. The casino chain — which has 36 locations in 13 states — encourages customers to use a loyalty card for as many purchases as possible, from nickel slots to room changes to swank no-limit tables. The cards feed data back to Harrah's. Stanley says it takes only a couple of visits for the system to make accurate guesses about



whether a customer fits into one of the casino's two highest segments, dubbed "avid experience players" and "very important players."

'Addictive' Service

According to Forrester's Kinklin, one of the top challenges when dealing with the rich is identifying them in all channels. "Good service is addictive," she says. "Once you get it, you want it all the time." Interestingly, she adds, the laggard channel tends to be the physical store. When an affluent client appears online or calls, customer service representatives in contact centers can immediately peg them as high rollers. This raises the customer's expectations, which may be dashed when he wanders into a store belonging to the same company and is treated like one of the great unwashed.

In that respect, the Seattle Mariners are fortunate. Their regular customers — that is, season ticket holders and luxury suite owners — have assigned seats. Last year, the baseball team switched from a largely paper-based customer-care system to a CRM system

from Onyx Software Corp. in Bellevue, Wash. The software allows the team to track complaints and requests from season ticket holders as well as any body enrolled in the team's loyalty program, says Larry Witherspoon, vice president of technology services.

Onyx helps the Mariners pamper suite owners through an approach that marries high touch and high tech. From the time a corporate customer or other high roller calls the club to order a suite, the in-house catering, house-keeping and ticketing groups are automatically notified of any special requests, "and the account exec can just pop in to visit the client" during a game, Witherspoon says. He says the team has reduced complaints from luxury suite holders a whopping 80% since implementing the software.

Searching in Style

Technology aimed at enticing the rich goes beyond CRM. One well-to-do technology company executive with a 120-mile weekly commute was such a regular passenger on the same flights up and down the West Coast that his airline took to paging him when those flights ran into delays. Kinklin says this type of proactive service is exactly what companies must offer affluent customers in order to retain their business.

Even the way the rich think about shopping is different, researchers have found, and upscale companies' Web sites are changing accordingly. Last year, Neiman Marcus implemented One Step, a natural-language search engine from iPhras Technologies Inc. in Cambridge, Mass., at the retailer's Web site. Neiman Marcus' research showed that high-end shoppers are much more specific about the items they're seeking than average shoppers. For example, while a Target shopper might simply search for "pocketbooks" and sort by price, a Neiman Marcus customer is more likely to search for "cloth Kate Spade totes with leather trim."

According to a Neiman Marcus spokesman, the retailer has tripled its conversion rate — the percentage of online shoppers who follow through and make a purchase. The spokesman adds that those shoppers return to the site twice as often as they used to.

Apparently, the rich know exactly what they want — and if you want their business, you need to know exactly how to deliver. **42371**

Ulfelder is a contributing writer in Southboro, Mass. Contact him at ulfelder@charter.net.

COMPLETE SAN SOLUTION FROM



CLARION CX200 with 350 GB storage
Navisphere® and Access Logix™ management software
Connectrix™ 8-port switch
Installation and support



Find an authorized EMC Velocity² Partner
at www.EMC.com/velocity

EMC, EMC, where Information Goes, Navisphere, and CLARION are registered trademarks and Connectrix and Access Logix are trademarks of EMC Corporation. Velocity is a registered trademark of Brocade Communications Systems, Inc. ©2003 EMC Corporation. All rights reserved.

Get on the best growth
path in storage.



THE NATURE of business competition is changing in a fundamental way, and the repercussions for IT are profound. The classic model of company vs. company is starting to give way to a new model: supply chain vs. supply chain. In the 21st century, being the best at producing or selling a superior product is no longer enough. Success now depends on assembling a team of companies that can rise above the win/lose negotiations of conventional trading relationships and work together to deliver the best products at the best price. Excellence in manufacturing is just the admission fee to be a player in the larger game of supply chain competition.

We've all seen the harbingers of this upheaval. The stories of how Dell Inc. and Wal-Mart Stores Inc. devastated their competition by reinventing their supply chains are now firmly established in business folklore. But the implications of the new competition run far deeper than a few spectacular success stories. Getting the supply chain right is no longer just an exciting opportunity. It's a survival skill.

There are two other business stories that should be posted in our collective consciousness right beside those of Dell and Wal-Mart: the tortuous experiences of Nike Inc. and Cisco Systems Inc. when they ran into trouble with their supply chains. In Nike's case, the crisis came in May 2001, when the Beaverton, Ore.-based company announced that the sales for the preceding quarter were \$100 million lower than expected because of confusion in its supply chain. This loss, while impressive, was soon eclipsed by Cisco's announcement that it was writing down \$2.2 billion in unusable inventory due to problems in its supply chain. It was the largest inventory write-off in the history of business.

These are compelling demonstrations of the importance of keeping supply chains running smoothly.

The very nature of business competition is changing, and IT has a big, challenging role. **By David A. Taylor**

SUPPLY CHAIN vs. SUPPLY CHAIN

But these operational losses, large as they are, represent only part of the true cost of supply chain failures. The larger hit comes when companies reveal their mistakes to the financial markets. The day Nike announced the breakdown in its chain, the company's stock dropped 20%, an amount so staggering that it makes the \$100 million loss seem like pocket change.

That's a big penalty to pay for a single failure, but it's not atypical. A study by Vinod Singh and Kevin Hendricks in the January 2002 issue of *Supply Chain Management Review* examined supply chain problems at L3H companies from 1989 to 1999. They found that companies reporting such problems suffered an average drop of 7.5% in their stock price the day of the announcements. This loss of value was no temporary setback; the decline in valuation began as early as six months prior to the announcements and often continued for six months afterward. The total drop over the 12-month period was a whopping 18.5%, with an estimated loss in shareholder value averaging more than \$350 million per incident.

How does this shift in the nature of competition affect IT departments? For starters, it means they need to support yet another generation of enterprise applications, with all the growing pains and integration problems that entails. Although supply chain management software forms a tidy category on industry analysts' charts, in reality, it's an odd conglomeration of packages from a variety of vendors, few of which are large and stable players.

The mainstay application is the advanced planning and scheduling (APS) system, which offers a mix of design and planning tools that use mathematical techniques to optimize the flow of goods across the chain. It generally includes separate planning modules for managing demand, distribution, production, material requirements, purchasing and fulfillment, all of which have some overlap with the modules of enterprise resource planning systems. Linking an APS system to an ERP system, although simple in principle, is a major integration project.

Other supply chain applications

include multimodule systems for managing warehousing, transportation, customer relationships and supplier relationships. There are also newer systems for monitoring the chain as a whole and responding to problems as they occur. These packages come from many vendors and are built using a wide range of technologies, which further complicates the integration process. Integration problems are gradually being solved, largely through major ERP vendors incorporating supply chain applications into their flagship products, but the industry hasn't yet matured to the point where installing supply chain software is simple or safe.

The examples cited previously illustrate how great the burden of failure can be. Nike's supply chain crisis was caused by a failed installation of i2 Technologies Inc.'s APS system. And Cisco's \$2.2 billion write-down was due in large part to a materials planning system that allowed demand for components to be double- and triple-counted across its suppliers.

Another example is Kmart Corp., which announced in May 2000 that it was spending \$1.4 billion on software and services to overhaul its supply chain, including planning systems from Dallas-based i2 and warehouse management software from EXE Technologies Inc. also in Dallas.

A year and a half later, before the systems ever went live, Troy, Mich.-based Kmart announced that it was abandoning most of the software it had purchased and was instead buying \$600 million worth of warehouse management software from Atlanta-based Manhattan Associates Inc.

This new push also failed to solve the company's supply chain problems, and it went into bankruptcy in January 2002 (Quintick Link 2676).

In short, managing the adoption of supply chain software is a perilous business at best. But the difficulties of implementing a new generation of enterprise software are only a small part of the challenge facing IT organizations. The greater challenge lies in the fact that, in the new competition, the true enterprise is the supply chain itself, not

the companies that make up that chain.

To date, supply chain software has taken a company-centric view, with each member of the chain hosting its own systems and independently representing its trading partners and their actions. This is a stop-gap measure at best; effective supply chain management will ultimately require systems that cross organizational boundaries at will. The days of closed corporate software are coming to an end. The new competition will usher in an era of highly distributed, multicompany software systems.

A New Model

The infrastructure to support these distributed systems is now in place, and the software stack for this new generation of systems looks very different from the classic model. The platform for multicompany systems is, of course, the Internet, though the resulting networks will usually be implemented as extranets for security reasons. The key communication protocol is XML, which has already become the standard for information exchange between companies.

The next key ingredient is the Simple Object Access Protocol, which allows applications to make remote procedure calls to one another using XML to format their requests and replies. SOAP is the enabling technology for Web services, which allow applications to be more loosely coupled and call upon each other on an ad hoc basis.

This is a formidable stack of new technologies, but they're only the basic platform for the real business functionality. To enable multicompany planning and transactions, existing applications for managing local production and supply have to be made accessible to Web-service requests so they can become part of a larger, chain-spanning system. Beyond

this, some form of collaboration software is required to coordinate the efforts of planning and production teams across member organizations. And all of this will have to be installed, managed and maintained by teams of IT professionals drawn from different companies and operating out of different locations.

Sound like a challenge? It is, but look on the bright side. IT organizations spent the last part of the 1990s struggling to solve the Y2K problem before the clock ran out, only to be hit by cutbacks and austerity measures following the tech wreck of 2000. The emergence of Internet-based, multicompany supply chain systems is an opportunity to breathe new life into IT groups that are now bogged down in maintenance and repair. In short, the new competition brings with it an exciting mission for IT organizations. This mission may seem only slightly less daunting than putting a man on the moon, but who could resist the opportunity to take up that kind of challenge?

Q 42365

Taylor is the author of the new book *Supply Chains: A Manager's Guide* (Addison-Wesley, 2004). Contact him at dtaylor@SupplyChainGuide.com.



From the customer's point of view, supply chain are irrelevant. All of the hardball price negotiations and careful synchronization of deliveries don't matter to consumers. For them, it all boils down to which retailer can sell them the best products at the best price. The supply chain that can do that will win the others will lose. This chart illustrates the point by showing how a supply chain that's consistently cost-effective across the chain will outperform chains that are superior in only one link.

| | Producer | Distributors | Retailers | Consumers |
|---|----------|--------------|-----------|-----------|
| A | \$90* | \$30 | \$20 | \$140 |
| B | \$100 | \$20* | \$20 | \$140 |
| C | \$100 | \$30 | \$10* | \$140 |
| D | \$95 | \$25 | \$15 | \$135 |

But these operational losses, large as they are, represent only part of the true cost of supply chain failures. The larger hit comes when companies reveal their mistakes to the financial markets. The day Nike announced the breakdown in its chain, the company's stock dropped 20%, an amount so staggering that it makes the \$500 million loss seem like pocket change.

That's a huge penalty to pay for a single failure. It's not atypical. A study by Vinod Singhal and Kevin Hendricks in the January 2002 issue of Supply Chain Management Review examined supply chain problems at L31 companies from 1989 to 1999. They found that companies reporting such problems suffered an average drop of 7.5% in their stock price the day of the announcements. This loss of value was no temporary setback; the decline in valuation began as early as six months prior to the announcements and often continued for six months afterward. The total drop over the 12-month period was a whopping 18.5%, with an estimated loss in shareholder value averaging more than \$350 million per incident.

How does this shift in the nature of competition affect IT departments? For starters, it means they need to support yet another generation of enterprise applications, with all the growing pains and integration problems that entails. Although supply chain management software forms a tidy category on industry analysts' charts, in reality, it's an odd conglomerate of packages from a variety of vendors, few of which are large and stable players.

The mainstay application is the advanced planning and scheduling (APS) system, which offers a mix of design and planning tools that use mathematical techniques to optimize the flow of goods across the chain. It generally includes separate planning modules for managing demand, distribution, production, material requirements, purchasing and fulfillment, all of which have some overlap with the modules of enterprise resource planning systems. Linking an APS system to an ERP system, although simple in principle, is a major integration project.

Other supply chain applications

include multimodule systems for managing warehousing, transportation, customer relationships and supplier relationships. There are also newer systems for monitoring the chain as a whole and responding to problems as they occur. These packages come from many vendors and are built using a wide range of technologies, which further complicates the integration process. Integration problems are gradually being solved, largely through major ERP vendors incorporating supply chain applications into their flagship products, but the industry hasn't yet matured to the point where installing supply chain software is simple or safe.

The examples cited previously illustrate how great the burden of failure can be. Nike's supply chain crisis was caused by a failed installation of i2 Technologies Inc.'s APS system. And Cisco's \$2.2 billion write-down was due in large part to a materials planning system that allowed demand for components to be double- and triple-counted across its suppliers.

Another example is Kmart Corp., which announced in May 2000 that it was spending \$1.4 billion on software and services to overhaul its supply chain, including planning systems from Dallas-based i2 and warehouse management software from EXI Technologies Inc., also in Dallas.

A year and a half later, before the systems even went live, Troy, Mich.-based Kmart announced that it was abandoning most of the software it had purchased and was instead buying \$600 million worth of warehouse management software from Atlanta-based Manhattan Associates Inc. This new push also failed to solve the company's supply chain problems, and it went into bankruptcy in January 2002 (QuickLink 26761).

In short, managing the adoption of supply chain software is a perilous business at best. But the difficulties of implementing a new generation of enterprise software are only a small part of the challenge facing IT organizations. The greater challenge lies in the fact that, in the new competition, the true enterprise is the supply chain itself, not

the companies that make up that chain.

To date, supply chain software has taken a company-centric view, in which each member of the chain housing its own systems and independently representing its trading partners and their actions. This is a stopgap measure at best: effective supply chain management will ultimately be a game system that crosses organizational boundaries as well. The days of closed corporate software are coming to an end. The new competition will usher in an era of highly distributed, multicompany system software.

A New Model

The infrastructure to support these distributed systems is now in place, and the software stack for this new generation of systems looks very different from the classic model. The platform for multicompany systems is, of course, the Internet, though the resulting networks will usually be implemented as extranets for security reasons. The key communication protocol is XML, which has already become the standard for information exchange between companies. The next key ingredient is the Simple Object Access Protocol, which allows applications to make remote procedure calls to one another using XML to format their requests and replies. SOAP is the enabling technology for Web services, which allow applications to be more loosely coupled and call upon each other on an ad hoc basis.

This is a formidable stack of new technologies, but they're only the basic platform for the real business functionality. To enable multicompany planning and transactions, existing applications for managing local production and supply have to be made accessible to Web-service requests so they can become part of a larger, chain-spanning system. Beyond this, some form of collaboration software is required to coordinate the efforts of planning and production teams across member organizations. And all of this will have to be installed, managed and maintained by teams of IT professionals drawn from different companies and operating out of different locations.

Sound like a challenge? It is, but look on the bright side: IT organizations spent the last part of the 1990s struggling to solve the Y2K problem before the clock ran out; it may be hit by cutbacks and austerity measures following the tech wreck of 2000. The emergence of Internet-based, multicompany supply chain systems is an opportunity to breathe new life into IT groups that are now bogged down in maintenance and repair. In short, the new competition brings with it an exciting mission for IT organizations. This mission may seem only slightly less daunting than putting a man on the moon, but who could resist the opportunity to take up that kind of challenge?

© 42360

Taylor is the author of the new book *Supply Chains: A Manager's Guide* (Addison-Wesley, 2004). Contact him at dtaylor@SupplyChainGuide.com.



BRIEFS

Boeing Appoints Jamieson as CTO

The Boeing Co. last week appointed James Jamieson, 55, as chief technology officer. He has held various management positions during his 27 years at the aerospace company and most recently was senior vice president for commercial airplane programs. Jamieson replaces David Swain, who in July was named chief operating officer at Boeing's Integrated Defense Systems unit.

ShopKo Promotes Lynch to CIO

ShopKo Stores Inc., a \$3 billion Green Bay, Wis.-based retailer, has promoted Matt Lynch, 44, to senior vice president and CIO. Lynch had been vice president of operations and technology services since 1998, when he joined the company. His 20-year career in IT has included management positions at America West Airlines Inc., Air Wisconsin Airlines Corp. and Runzheimer International. In his new role, he will lead the strategy and implementation of IT programs for the company's 361 ShopKo and Planda Inc. discount stores in 23 states.

Online Inspection Service Taps CTO

Trinity Inspection Services Inc., an Addison, Texas-based online company that provides fast turnaround times for residential "true inspections," has named David Schneider as CTO. He will help direct customer integration and the development of online services to meet growing demand from mortgage lenders. Draw inspections are used to confirm that each phase of new construction meets the size specifications of the lender. As each phase is completed, the lender releases payment. Trinity offers access to more than 2,300 inspectors nationwide. Schneider has worked in IT for 20 years, including management positions at PricewaterhouseCoopers and BancSource Mortgage.

BART PERKINS

Outsourcing's Dirty Little Secret

OUTSOURCING IS PERCEIVED as the silver bullet of the day, and many companies indeed benefit from it. But the dirty little secret of outsourcing has emerged: Everyone isn't happy.

By the end of the first year, more than 50% of the companies that have outsourced major IT functions are unhappy with their outsourcees, according to an informal survey of my clients. By the end of the second year, 70% are unhappy. Studies by DiamondCluster International Inc. and PA Consulting Group have also uncovered significant amounts of dissatisfaction with outsourcing deals.

Doing your homework thoroughly is the best investment your organization can make in any attempt to outsource (QuickLink 36778). Every corporation understands the importance of due diligence. Nevertheless, many organizations try to cut the amount of time spent on investigation before signing the contract. But short-cutting the due-diligence process increases the likelihood of dissatisfaction with your outsourcee down the road.

Even with comprehensive due diligence and detailed contracts, many companies are unhappy with the results of their outsourcing efforts. Some common reasons include:

Charging leadership. In this situation, the leadership team that negotiated the original agreement isn't in place during execution. Outsourcees rarely confuse sales with delivery, and they intentionally bring in a different team to manage delivery. In cases where a large percentage of IT functions get



outsourced, the IT executives who negotiated the outsourcing deal often find their resulting jobs too diminished to be satisfying, and they leave. Team members on both sides change, and the new group feels less ownership. The new team needs to form a strong bond by confronting a large, interesting and complex problem that needs resolution.

Misleading the contract for the relationship. Just as a prenuptial agreement doesn't guarantee a successful marriage, detailed contract terms don't guarantee successful

outsourcing (although the relationship will certainly be doomed without them). Moreover, some teams will focus exclusively on the details contained in a contract. In those cases, the original business intent is often lost—the contract becomes a substitute for leadership and clear thinking.

In addition, team members on each side need to feel they have a strong personal relationship with their counterparts. Changes will inevitably occur; global business is too dynamic to put every possible future event into a contract. Strong relationships will promote a willingness to compromise when needed and find creative solutions instead of pointing fingers.

Sales puffery. The outsourcee's sales team is trained to understand the client's needs and formulate saleable solutions. Their proposals often reflect their fear that the competition

can meet the client's demands. Since they know they won't have to deliver, salespeople often overcommit rather than risk losing the sale.

Reduced appetite for risk. When a company makes a bold bet on new technology or new business processes, the individuals responsible usually either receive rewards or suffer career harm. But the risks and rewards are never as personal with an outsourcee (including systems integrators). The outsourcee's IT professionals aren't compensated to take risks. They're paid to make the outsourced functions operate as efficiently as possible and to meet service levels. They don't have the chutzpah to make bold moves. So companies need to make any visionary changes they want before outsourcing.

Insufficient performance monitoring. Without regular, constructive, fact-based performance reviews with your outsourcee, you have little chance of successful outsourcing. Even the best metrics can't contribute to success if they aren't reviewed and used to improve performance. If your outsourcee accuses you of unrealistic expectations, or if performance reviews become confrontational, hire an unbiased third party to validate the accuracy of the metrics and run the review meetings. This will help diffuse tensions between your organization and outsourcee.

Most of all, remember that the responsibility for the success of outsourcing remains with you—even after the contract is signed. Being aware of the obstacles will give you the leverage to overcome them, and increase the likelihood that your outsourcing efforts will be successful.

Q 42490

WANT OUR OPINION?

For more columns and links to our archives, go to www.computerworld.com/pollbox

www.internetishop.com

Life Time
Tech Support!Log On Now And Save
BIG on
Shop
Specials15 Years of Customer Satisfaction, from Manufacturer Direct!
Savings up to 50% Shop Presents!

NEC CD-ROM
4.0 DVD Burner
with Power
Steering
2-Drive
System
Model No. SP-405-DVDR200
\$155



Gateway FX 3000
200MHz Speed 5.0
Serial Modem
Model No. SP-405-DVDR200
\$145



Gateway FX 3000
200MHz Speed 5.0
Serial Modem
Model No. SP-405-DVDR200
\$149



Gateway FX 3000
200MHz Speed 5.0
Serial Modem
Model No. SP-405-DVDR200
\$299

Your One Stop Online
Super Store!

Model No. TBM/GO

Free Price Special \$799 & up
- Transcend 1 GigaByte CPU 81248 L2
Cache
- 30MB Memory, 30GB Hard Drive
- 14" VGA TFT LCD Monitor
- OnChip CD-ROM Drive
- 4.5 Hours Battery Life
- Built-in Wireless LAN
- Built-in Ethernet Adapter
- Built-in Fax Modem
- One Year Parts & Labor warranty



Model No. CTA254



Model No. S21013F

Free Shipping \$1479 & up
- Intel Pentium III (Coppermine) 1 300MHz
(400MHz FSB)
- 32MB DDR 333 Memory, 40GB Hard Drive
- ATI Mobility, 10MB DPMAR Video
- 4.5 Hours Battery Life
- 15" SXGA TFT LCD Monitor
- Teac CD-RW Drive
- Built-in Ethernet Adapter
- Built-in Fax Modem
- Built-in 13MB IEEE FireWire
- One Year Parts & Labor warranty



Model No. L17738A



Model No. F2320304

Free Shipping \$1999 & up
- Intel Pentium III (Coppermine) 1 300MHz
(400MHz FSB)
- 32MB DDR 333 Memory, 40GB Hard Drive
- ATI Mobility, 10MB DPMAR Video
- 4.5 Hours Battery Life
- 15" SXGA TFT LCD Monitor
- Teac CD-RW Drive
- Built-in Ethernet Adapter
- Built-in Fax Modem
- Built-in 13MB IEEE FireWire
- One Year Parts & Labor warranty



Model No. MS24323A

The Ultimate \$688 & up
- AMD K5 2000 1 800MHz Processor
- AMD 5V86A DPMAR System A Motherboard
- 16MB DDR Memory, 30GB Hard Drive
- Sony HD 48X CD-DVD Drive
- Sony SCD450 Internal CD-CDDrive
- 40GB AGP - GeForce FX 3000 10MB DDR
- Sound Blaster Live 5.1
- Latest 56K & 42K Modem Fax Modem
- 10000 PPM P.O. Tech Supporter Speaker System
- Crystal Clear DVD Apple Translucent PC Case
- One Year Parts & Labor warranty

The Ultimate \$999 & up
- PII 450 (Coppermine) System 475 MHz Processor
- System P4 500MHz P4B DDR 333 Motherboard
- 32MB DDR Memory, 30GB Hard Drive
- A-Open HD 48X CD-DVD Drive
- A-Open SCD450 Internal CD-CDDrive
- 40GB AGP - GeForce FX 3000 10MB DDR
- Sound Blaster Live 5.1
- Latest 56K & 42K Modem Fax Modem
- 10000 PPM P.O. Tech Supporter Speaker System
- Crystal Clear DVD Apple Translucent PC Case
- One Year Parts & Labor warranty

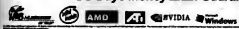
Free Shipping \$1499 & up
- AMD K5 2000 1 800MHz Processor
- AMD 5V86A DPMAR System A Motherboard
- 16MB DDR Memory, 30GB Hard Drive
- Sony HD 48X CD-DVD Drive
- Sony SCD450 Internal CD-CDDrive
- 40GB AGP - GeForce FX 3000 10MB DDR
- Sound Blaster Live 5.1
- Latest 56K & 42K Modem Fax Modem
- 10000 PPM P.O. Tech Supporter Speaker System
- Crystal Clear DVD Apple Translucent PC Case
- One Year Parts & Labor warranty

3% Discount, ~~Free Shipping~~ Free Gift with Purchase!!!**NO Risk**

Call Toll Free: 1-866-650-7400

Order Online Now 24 Hours, 7 Days A Week!
30 Days Money Back Guarantee!

INTERNET SHOP.COM



Mon-Fri 8:00AM - 5:00PM PST
Sat-Sun 8:00AM - 5:00PM PST

www.SpectorCNE.com

Record Everything Your Employees Do On The Internet.

With Spector CNE on your network, you will easily prevent or eliminate problems associated with Internet and PC abuse.

Spector CNE provides an immediate and accurate record of every employee's:

- ☐ Emails Sent & Received
- ☐ Chat/Instant Messages
- ☐ Keystrokes Typed
- ☐ Web Sites Visited
- ☐ Programs Launched
- ☐ VCR-like Snapshot Recording

FREE

1-888-598-1788

www.SpectorCNE.com

A few minutes a day of personal surfing, online shopping and chatting may seem harmless, but consider this...

A recent study concluded that employees spend an average of 75 minutes per day using office computers for non-business related activity (surfing porn, gambling, shopping or even searching for sex online). That translates into an annual loss of \$6250 per employee or more than \$300,000 per year down the drain for a company of just 50 employees.

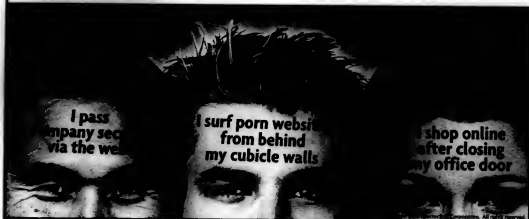
So how do you catch guilty employees who won't admit they are stealing company time?

Introducing Spector CNE - Corporate Network Edition

At the touch of a button, you can monitor any employee, any time, anywhere on the network. Spector CNE secretly records and archives chat conversations, instant messages (AOL, MSN and Yahoo), emails (including Outlook, Exchange, AOL and web-based mail like Hotmail), web sites visited, keystrokes typed, files downloaded, programs run and more.

And unlike many filtering and blocking tools, Spector CNE records everything they do in exact visual detail. So, you have absolute proof that goes way beyond just knowing they visited porn.com.

Take control of employee PC and Internet abuse with Spector CNE. It'll be the best software investment you make this year.



FRANK HAYES ■ FRANKLY SPEAKING

After the End

IBM DOES IT. Microsoft does it. PeopleSoft, Siebel and Computer Associates do it. So it shouldn't have been a surprise last week when SAP's CEO, Henning Kagermann, said that for customers who are willing to pay, SAP will keep supporting its products long after regular maintenance deals have ended.

Kagermann told a Gartner ITXpo audience in Cannes, France, that SAP offers four or five years of standard support, then customers can pay more for a two-year extension. "Even after this time, they can get support on a time-and-materials basis," Kagermann said. "There is no unsupported client of SAP."

Sure, it'll cost you. But if you'll pay, major software vendors will support you. That just makes sense. It goes without saying.

Then why did Kagermann have to say it?

That's not an idle question. Kagermann was responding to reports that SAP had killed support for its end-of-life products. Kagermann called those reports "stupid." But if no one believed those reports, Kagermann wouldn't have had to say something.

And why would anyone believe them? Maybe someone who read SAP's own description of the status of its R/2 product on the SAP Web site: "On December 31, 2004, SAP's support for the R/2 life cycle will end. Therefore, SAP encourages all SAP R/2 users to plan for migration." The statement then shifts into a pitch for upgrading.

Is that reasonable? Sure. R/2 is two decades old. Most R/2 users long ago migrated to other products; SAP says fewer than 250 sites still run R/2. It's certainly in SAP's interest to sunset R/2, and it's likely in the interest of most customers to upgrade.

But from what SAP says on its Web site, you couldn't tell that customers had a choice — could you?

SAP isn't alone. Most big software vendors aren't eager to point out that they'll keep their creaky old code going for you. If you want it, you'll have to ask for it specifically. In fact, just to find out whether that afterlife support is available, you'll have to know to ask about it. Vendors won't deny it exists, but they certainly don't advertise it.

Result: Many customers don't even know they have the option for an afterlife.

But it's something you probably should know about the major

software products your company uses.

Not because it's always a good idea to keep outdated products going as long as possible. But because afterlife support can inject just a little more reality into your decisions to upgrade, migrate or stand pat.

Look, you know the price tag for an upgrade. And you have a pretty good idea what switching to a different vendor's product will cost. You can make a dollars-and-cents case for either of those. And if you've been working the past few years with a frozen IT budget that's just now starting to thaw, you'll probably be making a lot of those cases in the months to come.

But what about doing nothing? That's an attractive twilight zone. It doesn't require an upgrade or migration line item. It just disappears from the budget, as far as top management is concerned. Sure, you know it will cost you — in time, effort and effectiveness. But how do you put a dollar value on that without making it look like a transparent guess?

Answer: Find out from the vendor what the

price is for afterlife support. That puts a number on it — a hard number, provided by a credible outsider. You can compare it to your guesstimate of what it will cost your staff to do the support by themselves. And you can use it to make the budget case for standing pat or making a change.

That's probably not the use vendors have in mind when they offer afterlife support.

But after all, they all do it. You might as well benefit from it — one way or another. ☐ 42620



Why Would You Need That?

Big company legal counsel says you need it if your choice must be made through... (text is small and blurry)

SHARK TANK

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

The Classified

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

... (text is small and blurry)

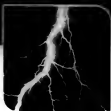
... (text is small and blurry)

... (text is small and blurry)

THE ADVANTAGE OF BEING FIRST



DISCOVER



HARNESS



CONNECT



ENGAGE

COMNET[®]
CONFERENCE & EXPO

SEE IT FIRST

CONFERENCE | JANUARY 26-29, 2004

EXPO | JANUARY 27-29, 2004

WASHINGTON CONVENTION CENTER
WASHINGTON, D.C.

**REGISTER TODAY AT
WWW.COMNETEXPO.COM**

**OR CALL (866) COMNETX.
PLEASE USE PRIORITY CODE MGER.**

The networking landscape is changing on every level. As the first event of the year to examine the most critical issues facing the networking industry, COMNET 2004 will demonstrate how wireless, security, VoIP, WAN and the data center are redefining how business is done.

COMNET 2004 will enable you to make informed technology evaluations and purchasing decisions for the year ahead. Come to COMNET 2004 and become a technology champion!

You cannot afford to miss COMNET 2004 if you need to:

- Secure your most important and valuable resources
- Connect and manage remote office resources
- Gain new efficiencies from your data center
- Evaluate service offerings from leading networking providers
- Understand the advantage of being first

Flagship Sponsor:

NetworkWorld

IDC

IDG Ventures

Media Sponsors:

**BUSINESS
COMPUTATIONS
REVIEW**

CONVERGENCE

CRN

**INTERNET
TELEPHONE**

**MOBILE
COMPUTING
MAGAZINE**

computing

NETWORK

**security
magazine**

Business

Vonmagazine

Webinars

**wireless
magazine**

Sponsors:

CISCO SYSTEMS


MSP Alliance
A Division of The IT Alliance Group, Inc.

ERNST & YOUNG
Quality In Everything We Do

SECURITY & PRIVACY
Building Confidence in the Information Age



Central nervous system monitors stimuli to maintain control.



iSeries integrates
with xSeries servers for
exceptional control.

@server

The human body has a powerful ability to maintain control, as do IBM eServer® iSeries® systems. They can help run your Linux applications and integrate seamlessly with IBM eServer xSeries® systems to support Windows® applications. So you get the power to manage your server farms from a single control point while sharing tape, storage and operations resources. Result: vastly simplified server management that can help maximize and streamline your infrastructure. So take control. Visit the URL below to learn how iSeries servers have improved ROI for other customers.

eServer servers for an demand business

Can you see it? See it at ibm.com/eserver/control



IBM® the e Business logo, eServer®, the eServer logo, iSeries® and eServer are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. Windows is a trademark of Microsoft Corporation in the United States and/or other countries. All other company product and service names may be trademarks or service marks of others. ©2003 IBM Corporation. All rights reserved.